—THE—

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

VOL. IV. CHICAGO, JANUARY 3, 1885. NO. 1.

ORIGINAL ARTICLES.

FRAGMENTARY COMMENTS ON SOME OF THE PRINCIPAL METHODS OF OPERATION FOR "STONE IN THE BLADDER."

With Special Reference to Allarton's Method, Also in Combination with Lithotripsy, Urethro-Lithotripsy, Urethrotomia Lithotriptica, Including Besides Critical Remarks Upon the Discussion of the Progress Made in Lithotripsy and "Lithotomy" at the Late International Medical Congress held in London, England, and divers other subjects comprising the Urinary Organs.

BY M. SCHUPPERT, M.D., OF NEW ORLEANS, LA.

Of the present essay, though written over two years ago, I have had so far no inducement to make any important alterations of its contents, and will therefore offer it for whatever it may be worth.

In conveying my views on some of the main operative methods for the removal of vesical calculi, I was induced principally by the success I had met, with Allarton's urethrotomy, and the failure on the other hand of the International Medical Congress held at London, England, to give us a better method. It was the disappointment I felt from the discussion on the subject by that phenomenal gathering of professional celebrities, a concourse of genius and talent more prodigious than the world had probably ever seen before, which led to my critical remarks. Amongst the chief subjects selected by that Congress for discussion, the operation for "stone in the bladder" occupied a prominent place. Considering the presence of so many illustrious representatives of the profession, it most assuredly could not be said it was claiming too much, in expecting a final settlement of the subject in question; either accepting and approving what so far had been accomplished as satisfactory, or giving us instead new and better methods. Nevertheless, if we except that single shining proof of American ingenuity, Bigelow's method of lithotripsy, the result of the discussion of that deliberating assembly on the subject in question was a most barren one, and in respect of the diverse methods of cystotomy, far from conclusive. The congressional success had evidently suffered from the preponderating influence of the address of its presiding officer.

Exploring the field of the operative technic of the diverse methods of the operation for stone, I met with many existing deficiencies which wanted reform; but it was most the unjust dereliction of Allarton's urethrotomy; that long since reconstructed, though repeatedly mistaken, or, converted and improperly disregarded operation; which induced me, and without prejudice, to again assign to the front rank that same *pærineal median uthrethrotomy of Allarton;* a method which comprises in itself all the elements rendering an operation valuable, and which if combined with lithotripsy will fullfil every demand required to establish its superiority. Such a method deserves more than a superficial mentioning. Its position is secured, whether the designation, or name I have applied, is adopted or improved upon.

The essay will also comprise an analysis of opinions, delivered on the subject in question by members of the International Congress, which will enlist some interest. I think it, moreover, proper to call attention to the importance of some of the supplementary contributions; all more or less intimately connected with the urinary organs, and which will lay open a number of sins of omission and commission. The rear of the essay will be brought up by an anomaly of the "*homo sapiens*," but with the ingenium gone astray, an unique in surgical history.

Before entering the main subject, I think it but proper to call attention here to two frequently used terms, which seem to me erroneously selected, or misapplied, and one of them even unorthographically written, which terms call for correction, according to the truism that: "an hundred years of *wrong* do not constitute a single day of *right*." No educated linguist will coin words or terms which etymologically misrepresent an idea he wishes to inculcate. Thus is the term "*lithotomy*" used promiscuously and erroneously for the operation of stone, in which the bladder or another part of the urinary tract, is incised, whilst the etymology of the word implies instead "*cutting the stone*," it being derived from *Λίθος*, the stone, and *Τέμνειν*, to cut. It is therefore synonymous with lithotripsy, or lithotrity, from *Λίθος* and *Τριβῖν*, fatur, *Τρίψω*, to cut to pieces. We ought therefore to supplant *lithotomy* by the two terms, *cystotomy* and *urethrotomy*, cutting either the bladder, or, the urethra, for obtaining the object of freeing the bladder from stone.

The other correction comprises the term "*perinæum*," or, "*perineal*," which ought to be written

pærineum and *pærineal*, in being derived from πυ̃ρχ, or, πυ̃ρις the bag, and νδίω, I dwell, designating the region between the ischiatic tuberosities, the anus and the scrotum. Properly, therefore, it can only be applied in the *male*, and not in the *female*. If we want a term applicable to both, to the male as well as the female, we ought to exchange the word for the term *interfemineum*, *interfemineal*, a word not derived, as some might believe, from *femina*, the woman, but which originates from *femen*, or *femur*, oris. *Interfemineum* would then signify the region between the thighs, and could be used in both sexes, in the male as well as the female. In many of the classical works of Livius, Lucretius, and even Plinius and Celsus, says the great anatomist Hyrtl, we meet with that term *femen* in the sense here given. Thus *feminalia* and *tibialia* were used by the Romans to signify bandages around thighs and legs, as our garters. So much for some corrections which speak for themselves, and ought to be adopted by every progressive mind.

Among the diverse operative methods for "stone in the bladder" we might best discriminate between operations without using the knife and such where the knife has to be employed; or operations by which the stone is removed through the natural passages, with or without a previous crushing, and such in which the removal of the stone is obtained by an artificial passage which can be accomplished either by incising the urethra, or the bladder. Finally we may distinguish a third method, a combination of the first two of cystotomy, or urethrotomy, with subsequent lithotripsy, of which the latter, no doubt, would be the preferable one, and which I have designated with *urethrotomia lithotriptica* (lithotriptic urethrotomy).

We would then obtain the following scheme:

A. *Lithotripsy.*
B. *Cystotomy.*
1. Lateral C. (pærineal lateral C.)
2. Epicystotomy (E. suprapubica, or sectioalta).
3. Proctocystotomy (C. recto-vesicalis.)
C. *Urethrotomy.*
1. Pærineal median Ur. (Allarton's method).
2. Bi-lateral, Dupuytren's.
3. Procto-urethrotomy (recto-median Ur.).
D. *Urethrotomia lithotriptica. Lithotriptic urethrotomy.*

It is known that the operation for stone was formerly in the hands of a certain class of specialists, called "*stone cutters*," and that it was not before the 18th century that the operation became common in good surgery. The disease indicates the operation *per se;* but the selection of the method for removing the stone depends on a variety of conditions and circumstances. Thus we have the nature and size of the stone, complications of the disease, state of the kidneys, of the bladder, the urethra, the urine, the age of the patient, etc., which will greatly influence the selection of the method and the time of the operation. The earlier the operation is performed the better, but this is often thwarted by ignorance and failure to detect the disease. Regarding the *Statistics*, I have but a few words to say. Certain writers on the subject, as Sir H. Thompson, of England, and others, have stated that in all cases of stone in the bladder, lithotripsy ought to be preferred "for humanity's sake." John E. Erichson, the illustrious President of the late International Medical Congress, a surgeon who usually commands confidence when he makes a direct, definite statement, is of the same opinion. Still his statistical mortuary reports of the two operations of cystotomy and lithotripsy, in his last edition of "Science and Art of Surgery," deserve but little credit. When here Erichson says "that $^4/_5$ of all cases in the adult were proper subjects for lithotripsy," we know very well that he based his dictum upon our known mortuary lists. But if we look a little closer into these same statistical records, and the material which served in their composition, we find that the majority of those cases, which underwent the operation of lithotripsy were so-called "*picked* or *selected cases.*" We have therefore merely the statistics of *selected cases* before us. Comparing them with the results obtained by cystotomy and urethrotomy indiscriminately chosen, and of cases operated upon often under the most unfavorable conditions, is an improper and unjustifiable proceeding.

Another, and not less important point, consists in the doubts which have been uttered with regard to the accuracy of the statements of certain known specialists of our days, upon which these statistics were mainly based. Thus Civiale, the known professional lithotritist of France, who once incited so great a stir amongst professional men, gives the deaths from that operation performed by him as 1 in 42.2, or, of 591 operations he will have lost but 14 (!) while the most skillful operators, in England for instance, had a mortality rate of 1 in 7.9, or, at the most favorable, 1 in 10. That such statements as those of Civiale, in the face of the known insalubrity and bad sanitary condition of the Parisian hospitals, and their equally known enormous death-rate in capital operations at Civiale's time, deserve but little credit, is obvious. But to observe Civiale's statements sink to the lowest ebb of credulity, we need only compare them with those of his more candid and trustworthy cotemporary fellow-citizen and colleague, the great and honest Malgaigne, whose estimates of mortality in those same hospitals of Paris were given by him as 1 in 4, and in private practice as 1 in 8. So much for statistics serving as a basis in giving preference, or superiority of the one method over the other here mentioned.

Selection of the method of operation.—Lithotripsy.—The promise with lithotripsy totally to remove "the decomposable debris" and the "*sharp fragments*" of the crushed calculus by the aspirator of Clover, or the highly priced evacuating apparatus of Bigelow are no doubt great improvements in the operation of lithotripsy, still they should not induce us to exclusively swear allegiance to that method. The danger arising from a wound so much feared, for instance, in the presence of a chronic cystitis, has lost its weight and importance under the proper administration of a thorough asepsis, or antisepsis.

Lithotripsy, except if combined with urethrotomy, has lost with me a great deal of its charm, even in

the hands of the ingenious Bigelow, since I have experienced the serviceable boon of *Allarton's pærineal median urethrotomy*. It may commonly be considered a great mistake to advance unqualified claims in favor of the superiority of a select method and give to it an unexceptional preference. In surgical practice, as well as in medicine generally, it ought to be recognized as one of the elementary truths and main principles: *in no disease to let one and the same treatment preponderate to the exclusion of all others.* The same disease may under different circumstances require an entirely different treatment. A thorough acqaintance with the diverse methods, in addition to the character of the ailment, and of the proper selection of the operation adapted to the special case, are what the surgeon ought to know and which will offer the best chances for success. The surgeon, on the contrary, who thinks to appropriate every case to his favorite hobby, must turn out at the end as complete a failure as the physician committed to the same dogma. The adoption of a method of operation is controlled by experience; its propriety in most instances is confirmed or refuted by its general results, and it is not uncommon that by experience views are gained widely different from those which at a former period had been recognized as true and proper. The question of the propriety of performing in a given case either cystotomy, lithotripsy, or urethrotomy, or the two latter combined, is often difficult to decide, on account of the various dispositions, the condition of the individual case, or on part of the operator.

One of the main objections raised by some surgeons against lithotripsy has been the fear that fragments of the crushed calculus might remain in the bladder, causing there, it was thought, *recidives*. But others proved that such fear was absurd, and the irritation or pain produced by such sharp fragments would be early disclosed by the irritable bladder; so that where no complaint by the patient was uttered, all of the debris had been discharged. If these views were correct, we would have to come to the conclusion that in cases where a new calculus had formed, different causes must have prevailed in its formation. And indeed, micro-chemical investigations about the origin of the calculus disease have confirmed that view to be the correct one. Recidives happening after cystotomy, as well as after lithotripsy, have further supported this opinion, that other causes had to exist to explain the origin of a calculus. We have been informed by reliable authority that in forty cases of cystotomy and lithotripsy such recidives happened twice, and in both cases after cystotomy. In one instance it was a second, in the other a third time that the operation had been performed in the same individual. Another referee told us "that in a case the lateral section had been performed three times—twice in the old cicatrix, without meeting any of the difficulties mentioned here, and two and three years after the first operation, when the recidives happened. The stones in this case consisted of phosphates of ammonia, magnesia and lime, with urate of ammonia" (Prof. Grube, of Charcow). It seems, then, that the probability of such recidives may exist wherever the patient continues to live under the same influences which were the cause of the formation of the calculus at the first time, though as to the nature of the influences we still remain in the dark.

But besides the empty fear for recidives from such remaining fragments, there exists still a more serious consequence from them, though overlooked by most surgeons, or erroneously considered of little consequence. Of this later.

The operation of *lithotripsy*, at present known as "*Bigelow's method*," is no doubt one of the most brilliant conceptions of human genius and of modern surgery. From the first efforts of its performance by Gruithousen in 1813 with his lithotripion and the three-branched instrument (trois branches) of Leroy d'Etiolles in 1822, Jacobson's articulated stone-breaker in 1829, and Hurteloup's epoch-making lithotriptor, or "percuteur courbé a marteau" in 1832, improved by Mercier, and still in use, until Bigelow's new armamentarium, with which the history of the operative technic of lithotripsy will in all probability be closed. In that history it seems we have a new proof of the old observation of how slowly and gradually the mind becomes educated till it finally arrives at a grand conception, the beginning of which usually being the most complicated and intricate before it finally obtains a simple solution.

The operation of lithotripsy is one of extraordinary delicacy, affording great skill and dexterity. Equally so has ample expertness and care to be employed in the manufacture of the instruments here used; and none of them ought to be taken in use before its strength and mettle have been fully tried, since a distortion or a break might cause much mischief. In the printed Transactions of the mentioned International Congress, we find an exact description of Bigelow's method, called *Lithotopaxy*, and also the drawings of the diverse instruments belonging to his armamentarium. The method of Bigelow has been proclaimed "as beyond further improvement, it being more than even an elaborate advancement, having reversed what so far had been based upon well-established principles, and it ought to be recognized as an entirely new operation." "The crushing of the calculus and the subsequent removal of its fragments *in one sitting*, to facilitate which the instruments have been altered, increased in size and improved in composition, and the results obtained by Bigelow himself, by Otis, Thompson in England, and others, all write in the confirmation of the characteristics of Bigelow's triumphant revolutionary method as a great advancement in surgical practice."

Far removed as I am from bickering or hair-splitting, yet I cannot agree with Dr. Teevan's international peroration in which he called the old method "the great opprobrium, that often neither killed nor cured; which removed the stone but failed to cure the patient;" and "that such was not the case with Bigelow's operation, which would not be followed by a chronic cystitis, with its consecutive phosphatic deposits." Singular that to some men it appears often so difficult, be it in their eulogies or censures, to mete out an even-handed justice.

What we have just heard here from Dr. Teevan is not quite "the whole truth." The doctor took the

colors rather too thick. I have known surgeons, for instance the late Dr. Stilling, one of the most skillful and lucky operators, and a specialist in lithotripsy to boot, who often extended the number of sitttngs to eight, twelve, and in several cases to even twenty (a great number of his cases were published in the *Berliner Klinik*) before he discharged his patients, and most of them perfectly cured. In none of his cases did we hear that a chronic cystitis followed the operation, nor was it mentioned as having already existed. Neither is the removal of all fragments in one sitting so absolute a necessity, nor does Bigelow's method require it.

Chronic cystitis frequently complicated with pyelitis (pyelonephritis) is one of those obstinate and unfortunately resisting diseases, in which lithotripsy, and were it even Bigelow's method, is of some service or advantage, which would render it preferable to urethrotomy or cystotomy. Yet lithotripsy migh: even be contraindicated, if the disease, for instance, should be complicated with an enlarged prostate, or with a great irritability of the bladder, where chills and a high fever might ensue. Cutting such a hypertrophied prostate would, on the contrary, have a beneficial influence; the gland getting thereby smaller, or attaining its normal size, provided that no alkalinity of the urine existed, and a proper aseptic treatment followed. The easier access to the bladder, permitting a frequent washing out with the aseptic liquids, a more thorough drainage, preventing any accumulation of urine, are all so well known beneficial factors in an existing chronic cystitis, that the question of a supremacy of urethrotomy or cystotomy cannot for a moment be doubted. Dr. Teevan considering as detrimental already a simple introduction and examination of the bladder with the catheter, in the presence of a chronic cystitis, how much more should he not avoid an operation with enlarged instruments, as the sound or percuteur, and such even during a protracted time of from one to three hours, after Bigelow's own statement? The examination of a bladder, if executed in a tender manner with aseptic instruments and the patient narcotized, ought not to alarm Dr. Teevan, since it is a totally harmless operation if properly handled. And when Dr. Teevan, in an old man with chronic cystitis and an enlarged prostate, hopes to accomplish more by lithotripsy, *followed* by external urethrotomy, a combination, the doctor prides himself on being the happy inventor of, I do not feel jealousy, nor do I grudge him *his* invention, neither will it induce me to cease giving preference to the "pærineal median urethrotomy," *followed*, if necessary, by lithotripsy, saving thereby time, labor, and also consistency.

Besides Dr. Teevan we met with other brilliant lights in that International Medical Congress, who have been to us a source of instruction and not less of amusement. Of great interest are thus the "*Congressional debates about lithotrity and lithotomy, their comparative value and of the progress which had been made in the two operations.*"

Decorum might require us to listen first to what the presiding officer had to say. I therefore call attention first to the distinguished surgeon John E. Erichsen, who at the same time delivered the inaugural address to the "*International Surgical Council*," composed of four vice-presidents and secretaries (all English), besides forty-one Englishmen, with twenty-five outsiders. Small as was the number of those foreign to English soil, it was sufficiently balanced by genius and talent. Among the eight important subjects laid down for discussion was, as third: "*The advances, if any, which of late had been made in lithotrity and lithotomy.*"

Regarding "lithotomy" *Erichsen* saw "much of change, possibly of novelty, but not so certainly anything of real progress." Erichsen put the question boldly: "Have we indeed advanced a single step, either in the *perfection* or in the *result* of that operation, since the days of Cheselden, of Martineau, or of Crosse, not to mention the names of more recent but equally illustrious surgeons and successful operators? They have certainly not been very encouraging in their results and can scarcely claim to be considered in the light of an advance on the lateral operation in skillful hands."

Yet Erichsen admitted that the methods of "lithotomy" might deserve this consideration—"that possibly in some forms of calculus and in certain conditions of the urinary organs a wise eclecticism might be exercised in the choice of one or the other of them." In lithotripsy he was willing to admit that a great and real advance had *probably* been made;" yea, he graciously declared that this great revolution had been effected by American *enterprise* and *skill*, that Bigelow's operation had completely changed the aspect of lithotripsy, and that here a fertile field had been opened for deliberation in what cases Bigelow's operation might safely be used? also the ultimate result upon the bladder and the kidneys a prolonged intravesical instrumentation would have." And again, "that further information would be needed as to the comparative advantage of one or more sittings, and the more important question of determining the life and future comfort of the patient.

The discussion which hereon ensued centered almost exclusively in the operation of Bigelow, while most of the propounded questions remained unanswered, instead of which those participating in the discussion gave us their views, with which they had probably intended beforehand to entertain the assembly.

From what is to be perceived of that inaugural address, as well as from the latest edition of his elaborate work on surgery, I do not believe John E. Erichsen always to be that unbiased judge whose dictum ought to carry great weight if not conviction with it. When Erichsen stated that in "lithotomy" we had *not* made any real progress; that we had not advanced a single step, either in the perfection or in the result of that operation since the days of Cheselden, not to mention the names of more recent illustrious surgeons and successful operators," I should like to inquire what kind of progress he was looking for and where the deficiencies came in? To these questions I consider myself the more entitled since Erichsen in that same address had remarked, and very properly: "that there could not always be

new fields for conquest by the knife." But when he then continues: "The revived median, its combination with lithotrity; the supra-pubic, whether done antiseptically or not, have certainly not been very encouraging in their results, and can scarcely claim to be considered in the light of an advance on the lateral operation in skillful hands," I again have to inquire after the source from which he felt empowered to form and express such an unfavorable, unjust and untrue opinion? When the mortality of a certain operation compares well with the most favored one, or even surpasses it, be it in the percentage of cures, the manner and security of execution, the smaller number of instruments used, or in the time of recovery, I think it unjust in a high degree to raise such complaints. When science has established such a variety of means for the cure of a disease as in "the operation for stone," any modest surgeon ought to be thankful for such "*richesse*," and fertility of genius, instead of uttering so unqualified a condemnation of a general want of progress. If in mentioning "the revived median operation" Erichsen referred to Allarton's method, I have even to increase my protest against such unjust and undeserved aspersion of so excellent and unrivalled an operation. Altogether, Erichsen's criticisms of the missing advance and progress in "lithotomy" have been unsound, contradictory and ungenerous; and most so have those surgeons unjustly been touched by it, who endeavored to cultivate a method so improperly neglected, misconstrued and falsely colored, as the pærineal median urethrotomy of Allarton, the obtained results of which will compare favorably with any other operation in the whole area of surgical practice.

Now let us hear another typical Englishman, Sir H. Thompson, "the greatest living operator for stone" as he is called, who is said to have performed the greatest number of such operations—beyond 800. Thompson stated "that he had operated after Bigelow's method in ninety cases, and that most of the old men operated upon had been of an average age of 60 years; and had lost of these ninety cases only three by death, whilst eighty-seven recovered. Ten cases he operated on during that time with the lateral section, of which number four had died, and one operated after Allarton's method, who had recovered. The calculi in the average weighed twenty grams, (five drachms). The majority of these cases, he stated, would not have admitted uncommon large instruments. The *smaller* the instruments, he thought, the *better* would be the results, and the earlier the operation was performed the better, since then every calculus might be removed in one sitting." Of the complicated cases he did not give an opinion. Of the various methods of "lithotomy" worth mentioning, he named "the *lateral section*, the *sectio alta*, the *pærineal median* and the *recto-vesicalis*." He gave the advice "to select either lithotrity or the lateral section, and if necessary also combined with crushing the calculus." Such a combination he thought "under some circumstances preferable and less dangerous than removing the calculus entire." From the result he himself obtained with that lateral section, a mortality of 40 per cent., he certainly could not very much recommend it. In lithotrity he advised to dilate well the urethra and neck of the bladder. The percuteur when entered through the urethra ought to be surrounded by an Indian rubber tube. The bladder ought partially to be filled with water to prevent the catching of parts of it; and the pelvis might be lifted to better keep the injected liquid in the bladder. The evacuation of the bladder from the fragments through a catheter, might it be ever so large, would nevertheless require *often repeated crushings;* a proceeding much more dangerous than an additional wound in the pærineal part of the urethra through which to remove the fragments. A cut into the enlarged prostate could be no objection, since by giving additional room such would be rather beneficial to the patient. A catheter introduced through the whole urethra would besides give pain, while if entered through a pærineal wound it would be well borne.

I have faithfully recorded here all Sir Thompson mentioned in the congressional debates appertaining to the matter under discussion. There is not much of new material of which we were not already aware, chiefly that the operation of lithotrity would be more successful under the application of smaller-sized catheters, a step evidently backwards from Bigelow's method. Not less remarkable is the lightning celerity with which Sir Thompson is stated to have performed his lithotritic operations, many in five minutes! When we consider all the precautions as given by himself, the catching of the stone—frequently the most difficult and time-consuming part—the crushing and removing all of the fragments, and probably through a small catheter, which he preferred, and with the assurance that none of the débris be left behind, continuing, according to his own statement, in the average but from six to nine minutes, (!) such passes my comprehension, and gives an idea of the wonderful dexterity of that wonderful man; and not less is his success to be wondered at, when we consider the danger which, under certain circumstances, a wound made by the percuteur, or even the smallest fragments remaining in the bladder may cause, under the total neglect of all antiseptic injections or washing out the bladder. And this the more so, since according to his own statement death *once* (?) followed, the real cause of which remained unknown to him. "Of chronic cystitis he met but a few cases, and which took him a long time to cure." Of the use of antiseptics he did not say a word; neither did he give us the number of accidents he met with; he only stated that: "occasionally phosphates did again form." Herewith we can take leave of Sir H. Thompson, turning to our countryman, the ingenious *Bigelow*. He, we are aware, removed the fragments through the whole length of the urethral canal, by his ingeniously constructed instruments. His method called litholopaxy has, by general consent, been called a "*question of apparatus*." Bigelow's essential instrument is the catheter, or sound of from 21 to 31 mm. circumference, with a large orifice, eye, while of the catheters commonly in use, it may well be said that "they delayed

the progress of lithotripsy for sixty years." Bigelow states that: "even the most minute piece of a crushed stone left behind might become the nucleus of a new calculus." But there exists still a greater danger, of which later. To prevent fragments from going back during the evacuating process, Bigelow constructed his evacuating apparatus, an improvement of Clover's, for washing out the bladder as well as for sounding after the smallest fragments. This instrument consists of a sound with a valve, or strainer, and a stiff bulb, all, according to him, very important parts for a successful lithotritic operation. The sound with the evacuator has been named "the key to modern lithotripsy." But when Bigelow said "it would take time to decide if modern lithotrity was not better than lithotomy," that question strikes me as being paradoxical, since such a time will probably never arrive. There may be more cases fit for the operation of litotripsy, but that does not render it superior to cutting, to urethrotomy, or cystotomy. Both methods may in time have their places better assigned than at present, but never will even modern "litholopaxy" displace either urethrotomy or cystotomy, just as there may arrive cases unfavorable for any operation at all. Neither do I assent when Bigelow thinks that "lithotripsy did not need any further statistics even in small stones," since complications may happen with small as well as large ones. Worthless as our present statistics are, the preference given to the knife in small children with small stones, instead of using the lithotriptor, will, I believe, be generally supported. In cases complicated with chronic cystitis and pyelitis, may the patients be old or young, the stones large or small, the patient will fare better under the selection of a cutting operation than by lithotripsy. Besides, it may be difficult for the practical surgeon to rid himself of the traditional preference for the knife. All of which will certainly delay the final verdict, which Bigelow thinks so near, if not already decided, so that he feels empowered to utter the dictum, "that the patient will encounter less risk with modern lithotrity," and that he does not know "any indication when lithotomy should peremptorily be decided upon."

The weight of the after-treatment: that the bladder should be well drained and the needed rest be given, which the knife will better accomplish, that alone ought to have made Bigelow hesitate to give such a categorical decision. His statement that lithotrity was not as skilfully executed by the general surgeon as "lithotomy," I most willingly admit, though want of skill is certainly not a point for a general recommendation, but then it should rather be in a preference for urethrotomy or cystotomy.

When Bigelow further states that "no secondary hæmorrhage could happen with lithotrity," I have to call his attention to recorded facts, and that even so expert and skillful a surgeon as Sir H. Thompson lost a case in consequence of it, according to his own statement. Regarding Bigelow's assertion that "there was not a grave wound in a diseased prostate, communicating perhaps with putrid catarrh of the urinary tract," I regret to have equally to protest against it, as not corresponding with stubborn facts.

Amongst 120 lithotriptic cases performed by American and English surgeons—counted in 1881—after Bigelow's method and with a death-rate of but six cases, or 5 per cent., excellent as that result would be, yet it cannot be taken exclusively as a criterion in judging the value of the method. The death rate, so uncertain a factor in itself, since we seldom, if ever, become acquainted with all the unfavorable results, is not by far the most important factor in judging the capacity of a method. It was just the high death-rate in cases complicated with cystitis and pyelitis, that lithotripsy, notwithstanding the success of some surgeons, was condemned and relinquished by the majority of the profession, when Bigelow appeared with his speedy and complete removal of the irritating and poisonous detritus; and by his revolutionary proceeding in the reconstruction of the instruments, not merely saved the operation from a total annihilation, but elevated it anew into the position of one of the foremost operations for the removal of a vesical calculus.

The drawback the new operation of litholopaxy suffers from, preventing it from a more frequent adoption, mostly so in localities where stone in the bladder belongs to the rare diseases, is the high price of the costly instruments—$40—which are in no comparison with the few and cheap instruments the operation of urethrotomy requires. This, with the skill required in the performance of litholopaxy, deters the general surgeon from its selection and preference, while to perform urethrotomy, or even cystotomy, unfortunately every tyro in the profession considers himself at least an Astley Cooper, a Velpeau or a Dieffenbach.

(TO BE CONTINUED.)

INCONTINENCE OF URINE IN CHILDREN.

BY SAMUEL S. ADAMS, A.M., M.D.,

LECTURER ON THE DISEASES OF CHILDREN, MEDICAL DEPARTMENT UNIVERSITY OF GEORGETOWN, D. C.

Read in Section on Diseases of Children of American Medical Association, May, 1884.

How a subject of as much importance should have so long escaped presentation and discussion before the American Medical Association is surprising; but the fact exists that it never has been presented to this body, and for that reason I have chosen it.

There is not much importance attached to the history of the disease. With the assistance of Drs. Kolipinski and McArdle, of this city, I have examined all the literature on the subject from 1784 to the present, including articles in German, French, Italian and Spanish. In 1784 Mitchell wrote on the disease as clearly as any subsequent author, and its pathology was as well understood then as now. The tendency at that time was to let it alone with a hope that puberty would restore the function of the bladder.

From birth the child instinctively voids its urine, and we take it for granted that the act is reflex. But with the evolution of the teeth, speech begins, intel-

ligence is developing, and we expect the will to control the sphincter vesicæ. The rule is that about the eighteenth month the child is taught to exercise complete control over the sphincter. If after this age the urine is passed involuntarily the tendency is to attribute the disgusting act rather to carelessness than to a pathological state, which to my mind is an injustice to the child. From observation and the supervision over children of every condition of life I am loath to accept this conclusion and am proud to state that all the cases which have come under my observation have had specific causes, and were not the effects of laziness. So, believing as I do in a pathological state, it delights me to attempt this defence of the long-abused unfortunate.

Many a child has been repeatedly and unmercifully punished for wetting his clothes or bed, in the face of repeated protestations that he could not help it. The disease and punishment go on together until the patient becomes such an object of disgust to himself and his family that they are impelled to seek professional advice. Then the parents learn that they have been chastising their child, perhaps for years, for a fault which was the result of disease and therefore uncontrollable, when they would have quickly resented a just punishment if administered by some one else for a real fault less offensive in its character.

Again, there are others who, while they believe the act involuntary, will let it run on for years with the hope that education and the inculcation of habits of cleanliness will effect a cure, or that their only hope for relief is in the establishment of puberty.

The child instinctively becomes neat, and seeks the proper time and place to empty its bladder, and I am unwilling to admit that it ever deliberately soils its clothes after it has once been taught to use the vessel. None of the brute creation will lie in their urine if they are not tied or penned; then why do we attribute this practice in the rational being to laziness? Simply because some are not able, by a careless and superficial examination, to find the cause, and well knowing that their reputations will be at stake if they do not account for the act, they too often condemn the helpless child to daily floggings. There must be a pathological condition to account for an act that makes nature an abhorrence to herself, and it is our duty to seek diligently for it, remove it, and thus transmute the filthy child into the cleanly.

But in too many cases the act continues untreated, in spite of punishments and the jeers of companions, until well-marked physical changes take place. The child, bright and cheerful by nature, soon loses his vivacity; shrinks from the presence of his companions; becomes morose and spiteful; pale and haggard; restless and nervous; will not look you in the face; and with chin depressed and upper lids drooping, presents, indeed, a striking likeness to the onanist.

We generally find the disease divided into three varieties. In the first class the subjects suffer from a constant dribbling of urine day and night. This variety is infrequent, and when found it is usually associated with some serious pathological state. I have met with but two cases of this kind, in boys about eight years of age, who for several years had been unable to retain their water. Examination revealed a vesical calculus in each case, which being removed, the function of the bladder became normal.

A second class comprises those whose incontinence is intermittent in character, and occurs in the day as well as at night. We find that in this class the urine is retained for a short time during the day when the desire to void comes, but before the child reaches a convenient place the sphincter is overcome, and the poor child is powerless to stop the flow. This is the form usually met with in the girl. In fact the histories of those I have seen have been that the girls would suddenly be taken with a desire to urinate, while in school or on the street, but before they could reach a closet the power of control gave way. The cause in these cases was found to be vulvitis or urethritis, as a result of the irritation from ascarides in the vagina.

But the third class is the one that interests us most because of its frequency in both sexes, its nocturnal character, its possible concealment for years, and the promptness with which it yields to treatment. It is the children of this class who are so frequently punished for bed-wetting when they are as powerless to control the sphincter during the night as are those of the two preceding classes during the day. They may, and usually do urinate before retiring, and yet, about midnight, during a profound sleep, the urine is passed again, or it may be that the night is passed without the accident, but just before rising in the morning the contents of a full bladder are involuntarily set free. Patients of this class generally dream of urinating. In the boys of this class urination takes place during erection of the penis. Again we meet with cases where the cause is obscure, but, nevertheless, the nocturnal incontinence occasionally takes place. In these patients I attribute the accident to causes that favor a perfectly physiological process in the adult. We well know that late suppers, rich food, wines, certain positions during repose, profound sleep, amorous or lascivious dreams, and many such causes produce a nocturnal pollution in the adult, and I am convinced that the same causes excite a similar irritation in the child, but instead of the seminal discharge, the physiological process of which is not yet established, the bladder is emptied. In each instance the discharge is the result of a conservative process of nature to relieve the irritation. Indeed, this theory seems the more plausible because in many instances the nocturnal bed-wetting goes on undisturbed until the full establishment of the sexual functions, when the enuresis is superseded by nocturnal pollutions. This theory is also tenable because most of the remedies which cure the adult of his complaint very quickly relieve the the child of its.

The disease is more frequent than the statistics of hospitals would seem to indicate, for the greater number of cases go untreated until a spontaneous cure is reached. The probability is, it is not always differentiated and recorded as a distinct disease, since in the statistics I have examined it seems to have oc-

curred only 46 times in 15,169 children treated at the Children's Hospital, D. C., five times in 2,058 at the Children's Hospital of Boston, and four times in 2,034 at the Children's Hospital of Philadelphia, or 55 times in 19,261 sick children.

It most frequently exists in children between 8 and 12 years, but may occur at any time between 2 years and puberty. It is common in both sexes, white and black.

Trousseau was the first to trace a relationship between incontinence and epilepsy, claiming that in rare instances one succeeded the other and that these histories always pointed to the transmission of one of the neuroses.

Some writers claim that there is a reflex relation between hip disease and nocturnal incontinence, but the records of the Children's Hospital of this city, where a great many cases of hip disease are treated annually, do not accord with the statement.

The following cases include some of each of the three classes:

CASE I. Ernest P., 4 years, W., was admitted to the service of Dr. F. A. Ashford at the Children's Hospital, D. C., during my term as resident physician, March 11, 1879. He had had difficulty in retaining and passing urine for several years. There was now constant dribbling. March 16 a calculus weighing 110 grains was removed by the lateral operation and the patient was soon after discharged cured.

This child had been regularly punished for several years while the stone was the constant irritant and its removal effected a speedy cure.

CASE II. Sarah C., 15 years, C., was admitted to the service of Dr. Busey, in the same institution, Oct. 28, 1876. She had had constant dribbling of urine for seven years. She was treated with the tincture of belladonna and was discharged cured Dec. 4, 1876.

In such cases as this it is not always easy to determine the pathological condition. Usually atony or paralysis of the bladder, enlarged prostate, or stricture of the urethra is present.

CASE III. Frank C., 7 years, W., was admitted to Dr. Ashford's service April 19, 1879. He had had dysuria for some time. As soon as he desired to urinate he had to run to the closet to avoid wetting his clothes. Wet the bed at night. Blood passed in urine at times. April 24 a calculus weighing 175 grains was, with great difficulty, removed by the lateral operation, and the patient was soon after discharged cured.

CASE IV. Henry S., 4 years, C., was admitted to the same service Sept. 12, 1871. For two years he had had difficulty in retaining his water and pain on micturition. A calculus weighing fourteen grains was removed by the lateral operation, and the patient was discharged cured.

CASE V. L. M., twenty-two months, W. M., was admitted to the same service Aug. 4, 1873. Had frequent desire to urinate, at times painful, sometimes involuntary; urine offensive. A calculus weighing fifty-two grains was removed by the lateral operation Aug. 11, and the patient was discharged cured.

CASE VI. S. T., 8 years, C. M., was admitted to the same service Aug. 5, 1880. He had difficulty in retaining his water and sometimes wet his bed. Examination revealed phimosis. Circumcision was performed Aug. 21, and the boy was soon after discharged cured.

CASE VII. C.W., 4 years, C. M., was admitted to the same service March 13, 1882. He had had for some time frequent and difficult urination; at times involuntary. Circumcision was performed and the boy cured.

CASE VIII. James S., 4 years, white. On the 19th of March, 1884, Dr. Busey invited me to assist in circumcising this boy. From birth the little fellow had been accustomed to pass his water frequently, but after straining for several minutes he would become tired and cease trying, apparently before the bladder was emptied. Dr. Busey's attention was called to this condition, and examination revealed an elongated prepuce, with an opening about the size of a knitting-needle. The patient at this time was pale, languid, thin, restless, slept at short intervals during the night; retained his water only a short time. He, being etherized, was circumcised as described later on. The adhesions to the glans were so firm that it required a longer time than usual to break them up. He soon recovered from the operation, and has not had any difficulty about urination since. Three weeks after the operation Dr. Busey informed me that I would hardly recognize the child. He had become fat, rosy and cheerful.

It may be claimed by some that this case is not properly classed, as there was no actual incontinence. But if it is admitted that in a perfectly healthy child of his age the urine should be retained three or four hours, then an uncontrollable desire to pass water at shorter intervals being shown, it would seem to approximate incontinence and hence this classification. Although I cannot state positively, still I venture the assertion that when the desire to urinate came, if he had not hurried to a convenient place he would have soiled his linen.

CASE IX. Mary W., 4 years, colored. Was admitted to Dr. Busey's service April 19, 1871. She had had incontinence, and intense pain on micturition for one week, the incontinence mostly at night. She was treated with tincture of belladonna, and discharged cured May 17.

CASE X. W. H., 12 years. W. M. Was admitted to the same service September 3, 1879. Four years before he had had measles; from that time he had had incontinence day and night. He was put on the belladonna treatment, and discharged cured March 6.

CASE XI. Guy P., 11 years, W. Was admitted to the same service September 3, 1879. He would generally hold his water until the bladder became distended, when he lost control over the sphincter. He was improving rapidly under the belladonna, when his parents removed him without the consent of the attending physician.

CASE XII. Nellie C., 8 years, W. Was admitted to the same service May 9, 1882. She had had incontinence day and night for six years. She was

given the stigma of maize and belladonna, and was discharged cured June 11.

Case XIII. Alice L., 4 years, W. Was brought to me for an excessive leucorrhœa and inability to retain her water for any length of time. At short intervals she would run for the closet, but before reaching it she would lose control over the bladder. Examination showed the presence of ascarides in the rectum and vagina. She was given santonin internally, and enemata of aloes and milk, and was speedily cured.

Sometimes we meet with cases of incontinence with high-colored, acid and offensive urine when the administration of bicarbonate of potassium will quickly effect a cure.

Finally, another class is met with where there is an adherent prepuce, with a collection of smegma behind the corona. In such cases breaking up the adhesions and cleansing the part will generally effect a cure.

Case XIV. Ida B., 13 years, C., was admitted to Dr. Busey's service April 12, 1883. She had had nocturnal incontinence for two years. She was treated with belladonna and discharged cured June 8, 1883.

Case XV. Fred. R., 3 years, W., was taken with balanitis in November, 1883. Upon examining him I found an elongated prepuce with an opening about large enough to admit an ordinary darning needle, from which was pouring a profuse purulent discharge. The inflammation was believed to be due to the phimosis, and I advised circumcision. At this time I questioned the mother as to whether he was the subject of nocturnal enuresis, and learned that he sometimes wet the bed, but was in the habit of calling her three or four times during the night to put him on the chamber. On the 24th of November, with the assistance of Dr. McArdle, circumcision was performed. The mucous membrane was adherent as far as the meatus, and a large quantity of smegma was behind the corona. In ten days the patient was discharged and up to date (May, 1884) has not wet his bed, holds his water well during the day, and rarely has to be taken up at night.

Case XVI. Charles O., 8 years. W. Four years prior to operating his father informed me that the boy was in the habit of wetting the bed at least once, and often several times, every night. At that time I did not examine the boy, but accepted the father's statement that the prepuce was long, incapable of being retracted, and with an opening large enough to admit a small probe. Owing to the father's prejudice against anæsthetics, and my unwillingness to operate without them, the trouble continued unchecked. I refused to advise the administration of drugs, stating that in my judgment the incontinence would never be cured without circumcision. In November, 1883, he had measles and was under my care. When convalescent and in good condition I proposed circumcision, and obtained the consent of the parents as well as the patient—the latter being anxious to be cured. On the 2nd of December, with the assistance of Dr. McArdle, circumcision was performed. While the night before the operation the patient voided his urine three times during sleep, since then he has only done so twice, at long intervals. On these occasions the incontinence was attributed to salty diet and the taking of large quantities of water.

At my request Dr. H. D. Fry, of this city, gave me the following details of a case that came under his observation. It properly belongs to class I:

Case XVII. "Sept. 13, 1882, I was requested by Dr. J. H. Davidson, of Montgomery Co., Md., to perform circumcision upon a patient of his who was suffering from incontinence of urine, due, apparently, to an elongated prepuce.

"The patient was fifteen and a half years of age, and fairly well grown. The penis was small and undeveloped, and extending from the end of the organ was a long snout-like projection of preputial tissue, which could not be retracted over the glans penis. His mother gave the following history of the case: Until the age of five years he was not unlike other children as regards both his general condition and the appearance of his *privates*. At this time his penis was broken out with poison oak and the prepuce could then be drawn back in order to attend to the dressing of the part. After his recovery the glans penis could not be exposed.

"When about eleven years of age the parts became sore again, and from this time he had no control over the discharge of urine. His general health declined; complexion was bad; complained of pains in his side, and became nervous and irritable. His manner at school was so different from that of other boys that his teacher's attention was called to his actions, and he spoke to the boy's parents and advised them to have something done with him.

"Such was the state of affairs at the time of the operation, and it had existed about four and a half years.

"I removed the redundant tissue back to the corona, broke away some adhesions that existed, and left the case with the request that no medicinal treatment should be employed. I wished to see the effect of the operation *per se*.

"April 28, 1884, the boy's mother wrote the following report: 'After the operation he had no fever; slept well without opiates; and suffered little pain. There was little or no suppuration. In a week he left his bed, and in a month returned to school. His general health since has improved slowly; is less irritable; complexion better; and retains his urine.'"

In the few cases of occasional nocturnal incontinence the cause may be an over-loaded stomach or bowel; intestinal worms, hip disease, adherent prepuce, or amorous or lascivious dreams.

I myself do not doubt that in cases of phymosis, the nocturnal incontinence is due to reflex irritation. In some cases the irritant is the smegma behind the corona which keeps up a constant excitation. During the day the will is powerful enough to overcome the action of the spinal centre presiding over urination, while at night the will is asleep and the reflex reaches its maximum. In other cases, owing to the contracted orifice of the prepuce, the bladder becomes tired from prolonged expulsive efforts and relaxes

before it is emptied. During the day frequent micturition is observed, but the bladder is not emptied; at night the desire to urinate is just as frequent, but the will is asleep and the spinal centre responds to the irritant by involuntary micturition.

To determine the pathological condition is not always an easy matter. Atony of the sphincter vesicæ, or spasm of the detrusor urinæ may be the cause. The controlling power over the sphincter, which is largely reflex, may, by the influence of the will, prevent the escape of urine during the day, but at night, when the will is asleep, this power is relaxed, and the consequence is involuntary micturition regardless of cerebration.

As I do not admit that incontinence is frequently the offshoot of fear or laziness, of course I hold that moral suasion and corporal punishment are not efficient correctives, and equally of course I contend that in most cases the indicated procedure is either remedial or operative.

It would be more interesting than instructive to examine the literature of the internal remedies which have been successful in these cases. Nearly every drug in the materia medica has been tried with equal success, if we are to credit the books. Drugs physiologically and chemically incompatible have been combined and success claimed for them. Accepting the theory of a want of tonicity in the muscular walls of the bladder, some have used remedies that should have aggravated the trouble and yet have claimed a perfect cure. In such cases the results were probably accidental, and most likely were brought about by nature in spite of the treatment.

Leonardi and others extol chloral, but others have failed to derive any benefit from its use. It acts by allaying the reflex irritability in the cord. I do not approve of the use of this drug with children, certainly not except with the utmost caution. Owing to the variability in strength of the preparation, and the uncertainty of its physiological action, as well as the individual idiosyncrasies, it must, in my opinion, be regarded as one of the most dangerous and uncertain remedies in common use.

The bromides take foremost rank in the treatment of those cases in which an exalted nervous condition can alone account for the incontinuence. They should be given in large doses at bedtime.

But belladonna is the remedy *par excellence* in the treatment of those cases believed to be associated with a tonic spasm of the bladder. One of its physiological actions is to relax the tonic contraction of the involuntary muscular fibres. The muscles of the bladder being of this class, when the atropia in the urine comes in contact with the walls of the bladder it allays irritability and relaxes spasm. In order to derive benefit from the drug it should be given in large doses at bedtime, which should be increased, drop by drop, daily, until improvement results or its physiological effects are obtained. It must be borne in mind that children will bear much larger proportional doses than adults. I speak in the highest terms of this drug because, as will be seen from the foregoing cases, it alone produced beneficial results in about four weeks.[1]

If there is a relaxation of the sphincter vesicæ or paresis of the muscles of the bladder, strychnia is indicated. But as I have never seen a case of this kind I have had no experience with it.

If the patients are puny or in ill-health we would naturally expect better results by improving the general health while we are administering remedies.

Experience has taught me that the best success attends those patients who are treated in hospitals. In these institutions the diet of the child can be regulated, and many advantages gained in treatment. Parents will insist and believe that the physician's instructions are carried out in full; but they forget the sympathizing friends about the house who think the child unduly restricted, and who are, therefore, willing and ready to cater to its whims. For this reason it has been my custom to advise children to be placed in the hospital. If the patient can be fully controlled, success will quickly attend the treatment indicated.

In order to make statistics of operative procedures valuable, the use of remedies should be suspended. If we operate, then the operation should stand upon its own merits, and not be embarrassed by drugs. After a circumcision, if belladonna is given how can we tell which means effected a cure? In the cases above reported as operated on, nothing but soporifics were given.

I do not advocate circumcision as the certainly indicated remedy in all cases, nor do I believe that every boy who has incontinence, with an elongated prepuce, should be compelled to undergo the operation. If the prepuce cannot be retracted, then I would advise operating; and while sometimes the opening in the prepuce is large enough, yet it cannot be retracted owing to adhesions. In such cases, if these adhesions are broken up favorable results will follow.

I prefer to perform the operation of circumcision in the following manner: The prepuce is drawn forward, and Henry's clamp tightly applied; the end of the prepuce is then cut off with scissors, and the clamp left on the stump for several minutes to check bleeding; a director is then pushed along the upper surface of the glans, and the mucous membrane divided beyond the corona. The membrane is then turned back to meet the retracted skin, and made fast by five silk sutures. In about ten days the patient is well. I remove only that part of the mucous membrane that is cut off with the end of the prepuce; for by leaving a long membrane it can be turned back and thereby hide the cicatrix, which is a source of mortification to many parents. In cases VIII, XV, and XVI, there is nothing to attract the attention to circumcised organs. One objection to the operation is that the glans will be left uncovered, and that it destroys to some extent the sensitiveness of the organ. If this were true it would in many cases prove a great blessing, but, unfortunately, it is not

[1] NOTE.—In all of Dr. Busey's cases the belladonna was given at night and increased, drop by drop, daily, until the desired effect was produced.

true. Another objection is that the beauty of the organ is destroyed, whereas, in fact, if the circumcision is neatly done the penis presents a far better appearance than it does with a redundant foreskin.

From the foregoing cases, which have invariably been attended with complete success, without the administration of a drop of medicine, is it to be wondered at that I so strongly favor circumcision?

Some have advised forcibly stretching the contracted prepuce—a process both tedious and unsatisfactory.

Teevan, a British writer, advocates slitting the meatus, which he thinks is too small in most children with incontinence. As I have not seen any cases requiring the operation, I must accept his statement that benefit was derived from it.

There is one other kind of treatment discussed and recommended in the books, that may be called the mechanical.

Many here present, I dare say, have been called to treat an œdematous prepuce caused by tying a string around the penis to prevent bed-wetting. Perhaps some little fellow, after frequent thrashings, has finally, in sheer desperation, conceived the idea of eluding the lash by tying up the escape-pipe. He may have missed the chastisement, but he paid dearly for the immunity.

Corrigan, apparently a writer of note in Great Britain, deliberately and strongly advocates hermetically sealing the prepuce with collodion. He stretches the prepuce and forms a pouch, into which the collodion is poured, solidifies, and thereby prevents the escape of urine!

Compression of the membranous portion of the urethra by a pad, and packing the vagina have also enthusiastic devotees!

Knotted towels, spiked belts and other uncomfortable rigging to prevent the child from lying on its back have also received their share of commendation.

It seems hardly necessary to comment on these various mechanical methods of treatment, since they seem to evince a hopeless ignorance of the etiology of the disease, and are not only valueless but actually harmful.

The bibliography of this subject has been very carefully examined, with the courteous and efficient aid of Drs. Fletcher and Wise of the Surgeon General's Office, U. S. A., and I believe the following is a measurably complete list:

Albutt, *Lancet*, London, 1870. Vol. ii, p. 703.
Bailey, *Southern Medical Record*, 1874, iv, 636.
Balti., *Phys. and Surg.*, 1874, vii, 44.
Barclay, *Med. Times and Gazette*, London, 1870, ii, 697.
Black, *Brit. Med. Jour.*, London, 1871, ii, 609.
Blanchard, *Lyon Médical*, 1875, xvii, 349.
Boston *Med. and Surg. Jour.*, 1859–60, lxi, 139.
Bradbury, *Brit. Med. Jour.*, London, 1871, i, 363.
Brenchley, *Practitioner*, London, 1876, 381.
Brügelmann, *Berl. Wilm. Wochenschr.*, 1873, x, 67.
Bryson, St. Louis *Med. and Surg. Jour.*, 1878, xxxiv, 12.
Bull. Gèn. de Ther. Med. et Chir., Paris, 1846, xxx, 88.
" " " " " " " " 1849, xxxvi, 221.
" " " " " " " " 1859, lvii, 24.
" *Soc. de Med. de Gaud.*, 1862, xxix, 7.
Cerchiari, *Bull. delle Scienze Med., Bologna*, 1838. 2 series, v, 84.
Chambers, *Provincial Med. and Surg. Journal*, London, 1846. 617.
Compton, *Ther. Gazette*, Detroit, 1880, i, 128.
Couriard, St. Petersburgh, *Méd. Zeitschr*, 1866, x, 29.
Cooke, *Med. and Phys. Jour.*, London, 1803, 423.
Corrigan, Dublin, *Quar.-Jour. Med. Sci.*, 1870, xlix, 113.
Coxe, Boston, *Med. and Surg. Jour.*, 1859, lxi. 72.
Cumin, *Cyclop. Prac. Med.*, Phila., 1845, iv, 575.
De l'incontinence d'urine essentialle, 4to, Paris, 1877, No. 130.
" " " " " These. 30 pp., 4to.
Denaux, *Ann. Soc. de Méd. de Gand.*, 1861, xxxix, 178.
Dittel, *Med. Jahrl.*, Wien, 1872, 123.
Essai sur l'electrotherapie dans l'incontinence nocturne del'urine, 36 pp., 4to, Paris, 1864, No. 113.
Farquharson, *Practitioner*, London, 1879, xxxiii, 7.
Fleischmann, *Oerter. Jahrl. f. Paediatr.*, Wien, 1872, ii, 76.
Gagey, 4to, Paris, 1860.
Gazette de Hop., Paris, 1851, No. 34,
Gross, N. A. M. *and Chir. Rev.*, Phil., 1860, iv, 453.
Guyon, *Moniteur*, Paris, 1877, ii, 95.
Harrison, *Va. Med. and Surg. Jour.*, Rich., 1854, iv, 320.
Howard, *Lancet*, London, 1872, i, 645.
Hertzka, *Jour. f, Kinderkrkhter*, Erlangen, 1859, xxxii, 42.
" " " " " 1872, lix, 1.
Hewson, *Amer. Jour. Med. Sci.*, 1858, xxxvi, N. S. 47.
" *Trans. Col. Phys.*, Phil., 1857, iii, N. S. 207.
Hill, *Rich. and Louisville M. J.*, 1874, xviii, 28.
Johns, Dublin, *Medical Press*, 1863, xlix, 419,
Kemble, Boston, *Med. and Surg Jour.*, 1878, xcviii, 526.
Kennedy, Dublin, *Jour. Med. Sci.*, 1874, 3d S., xxxi, 57.
" *Proceeds. Obstet. Soc.*, 1874, 187.
Lancet, 1868, ii, 7.
Lefebore, *Arch. Med.*, Belges, Brunelles, 1864, iii, 347.
Leonardi, *L'Ipprocratico*, Fano, 1872, xxii, 3d S., 54.
Leopold, *Neue Leitscher f. Geburtsh*, Berlin, 1852, xxxiii, 351.
Mastie, en l'armus coutre l'incontinence nocturne d'urine.
McIntyre, *Lancet*, London, 1878, i, 663,
Med. Chir. Trans., London, 1819, vi, 108.
Millet, *Bull. Gèn. d. Ther. Med. et Chir.*, Paris, 1862, lxiii, 337.
Mitchell, *Med, Observ, and Inquir.*, 1784, vi, 169.
Mondiése, *La Press Med.*, Paris, 1837, i, 145.
" *Arch. Gèn. de Méd.*, Paris, 1836, x, 2d S., 54.
Moreau, *Gazette de Hopit.*, Paris, 1851, 34.
Morris, *Med. and Surg. Reptr.*, Philadelphia, 1881, xliv, 652.
Nevru, 4to, Paris, 1880, No. 215.
Oliphant., *Lond. Med. Jour.*, 1786, vii, 416.
Oppolzer, *Allg. Wien Med. Zeit*, 1869, 188.
Otto, *N, Amer. M. and S. Jour.*, 1830, x, 364.
Paoli, Strasburg Theses, xxiv.
Paris, 1858, No. 277.
Parker, R. W., Obit. J. G. B. & I., London, 1880, viii, 206.
Parker, W. W., *Va Med Monthly*, 1879, vi, 709.
Perouse, Thèse 4to, Paris, 1834, No. 276; Paris Thèse v, 277.
Pooley, *Cin. Lancet and Observer*, 1875, xviii, N. S., 720.
Potter, *Amer. Jour. Med. Sci.*, 1866, iv, 439.
Prodi, Boerhaave Tijdischr Cyvaonhage, 1839, i, 200.
Recullard, 4to, Paris, 1876, No. 410.
Revue, *Med. Chir.*, Paris, 1847, i, 141.
Rhodes, *British Med. Jour.*, London, 1868, 53.
Ritter, *Jour. f. Chirug. Angenheild*, Berlin, 1832, xvii, 572.
" *Jour. f. Chirug. Angenheild*, Berlin, 1844, iii, 308.
Robinson, *Med. Examiner*, London, 1876, i, 464.
Schat, *d. Gezondh-Goirnchern*, 1865, viii, 184.
Simmons, *Amer. Jour. Obstets*, 1880, xiii, 431.
Skene, *Anns. Anat. and Surg.*, Brooklyn, 1881, iii, 48.
Slade, *Amer. Jour. Med. Sci.*, 1855, xxx, 71.
Sloane, *British Med. Jour.*, London, 1859, 119.
Smith, *Lancet*, London, 1861, i, 53.
Smyley, *Dublin Med. Press*, 1840, iv, 311.
Snelling, *Med. Gazette*, New York, 1869, iii, 73.
Stanford, *Trans. Georgia Med. Ass.*, 1872, 71.
Storer, *Med. and Surg. Jour.*, Boston, 1855, liii, 266.
Teevan, *Lancet*, London, 1879, i, 729.

Teevan, *Practitioner*, London, 1876, 274.
Thompson, *Lancet*, London, 1873, ii, 414.
Trier, *Hospitals Meddelisen Kjobenhon*, 1843, xxiv, 376.
Trousseau, *J. d. Méd. d. Chir.*, Paris, 1860, 2d S., xxxi, 106.
Whaley, *London Med. Gazette*, 1838, ii, 702.
Whittaker, *Cin. Jour. Medicine*, 1867, ii, 462.
Wilks, *Lancet*, London, 1864, i, 681.
Winslow, *Trans. Med. and Chirurg. Faculty Md.*, 1877, 183.
Wood, *Cin. Lancet and Observer*, 1869, xii, 502.
Woodman, *Med. Press and Circular*, London, 1872, 182.
Yeo, *Lancet*, London, 1870, ii, 563.
Young, *Amer. Jour. Med. Sci.*, 1845, v, 271.

HINTS ON THE USE OF DRAINAGE TUBES.

BY W. L. GETZ, M.D., MARSHALLTOWN, IOWA.

Some months ago we had occasion to evacuate a pelvic abscess, and use a drainage tube as a means of thorough drainage. Not having at hand at the time a regular drainage tube, we constructed one out of a piece of plain (small size) rubber tubing. After being in the opening for several days we desired to replace it by another tube; we attempted to remove it, found that the opening in the tissues through which the tube had passed had contracted so as to hold tightly the tube, and although we made but slight traction, anticipating the possibility of the tube's breaking, to our extreme discomfort and dissatisfaction, we soon realized that our anticipations were realities, a portion of the tube, an inch in length, remaining within the pelvic cavity.

We succeeded in removing it by dilating the opening through which the tube was passed; then introducing a small blunt hook, we succeeded in drawing the piece of tube into position, so that it was easily grasped by a pair of forceps and extracted, much to our satisfaction, and with a vow that in the future we shall select with *caution* our *material for drainage tubes*.

A hint on the removal of tubes and also upon their introduction may not be out of order here under circumstances as above described; where the tissues firmly hold the tube, we should adopt the plan of inserting within the tube a dilator of some kind with which to dilate the tissues before we attempt to withdraw the tube.

As a satisfactory method of introducing drainage tubes, we have found that where a trocar-canula were necessary to evacuate the contents of a cyst or an abscess, that by taking the precaution to use a canula a trifle larger than the drainage tube to be used, the latter could be conveniently passed through the canula into position and then the canula withdrawn.

A NEW SURGICAL POCKET CASE.

BY J. H. PARKINSON, M.D., SACRAMENTO, CAL.

Read before the Sacramento Society for Medical Improvement, Dec. 16, 1884.

To propose a new surgical pocket case may seem a very unnecessary proceeding, yet a glance at the catalogue of any large instrument maker shows that the best form has so far not been attained, for in no class of appliances, except perhaps the obstetric forceps, is the variety as great. Its name implies that it contains such instruments as may be required in minor surgery, arranged in the smallest bulk, so as to be readily carried with the minimum of inconvenience. In looking over the different models one must be struck by their singular unfitness for this object. The instruments are often clumsy and ill adapted for their purposes, the knives arranged in combinations dissimilar in ability, and articles are included which in practice are almost useless. No better instance of this can be cited than the British Army regulation case, with its portable hypodermic syringe, a weapon even in skilful hands of perilous accuracy. It is not alone that the contents shall be of the best and most improved manufacture, selected with a view to general utility and emergency, but that the case itself shall be of such dimensions as will by its portability ensure its always being at hand. Most manufacturers in an effort at compactness make their cases thick and short, so that when closed they are almost cylindrical. This is one of the most awkward forms conceivable for the pocket; it is not so much the length or breadth of a case which is objectionable as its thickness, and just in this essential particular existing models, otherwise practically useful, fall short. The first great step in the improvement of this most important adjunct to the practitioner was the invention of movable blades and universal handles, which has made it possible to carry a large number of cutting instruments in a confined space. Availing themselves of this, Tiemann & Co. and Charriére have produced very serviceable cases, while that of Professor Dugas, though not after the same model, is perhaps more useful than either. These which may be taken as the best types of their kind, are well suited for the office or carriage, but certainly not for the pocket of any garment save an "ulster."

Recognizing the disadvantages of existing models, and knowing the difficulties in the way I have proceeded slowly, practically testing any new idea before including it in the general plan. I think I have now a genuine "surgical pocket case," which, while it contains every instrument required in daily practice, is available in such emergencies as are at any time liable to occur. The instruments are of the best manufacture, combined where it was possible to do so without sacrificing effectiveness. The case is of a shape and material to render it adaptable to the pocket, and at the same time of sufficient strength to stand wear and tear and protect its contents.

The instruments, twenty-five in all, comprise two shell handles, each with a universal and Tiemann's catch to take blades, etc., containing respectively a small, sharp, pointed, curved, bistoury and tenotome. Fitting into these handles are a metacarpal saw, a knife, cutting edge 2⅝ inches in length; two scalpels, medium and small; a curved bistoury probe pointed; and a curved needle, a grooved exploring needle, Weir's combined lancet and vaccinator, a caustic case, also containing an eye spud for foreign bodies; a trocar and canula, an artery forceps, grooved to carry needle; slide catch, a bullet forceps, Tiemann's patent jaw action, open rings and catch; scissors, one

sharp, one probe point open rings; a combined tenaculum and aneurism needle; a director with end for separating tissues; a catheter, metallic, flexible, 9 inches long; a small eye probe, silver; Nélaton's probe, steel flexible; ordinary silver probe tapped to receive Nélaton's portion of silver probe with eye and *porte meche* tapped at one end and attachable to either of the foregoing; three steel pins for accupressure; some silver ones, smaller; needles, curved and straight; silver wire, silk suture and ligature assorted.

Taking the instruments in the above order. The handles are neatly made of the best tortoise shell, and contain in one end a strong tenotome and a short curved bistoury sharp pointed, secured with a slide catch when open. These two knives for general purposes are required more frequently than any others. As it is necessary to have two handles for the extra blades, and only possible to utilize one end for them, the advantage of having these two knives always prepared for use, and where they are taking up what would otherwise be waste space, is obvious. Tiemann's patent catch is so fully described elsewhere that I need not dwell upon it, except to add that it is perfect in its effective simplicity. The metacarpal saw is of the ordinary pattern. The long bistoury, which measures 2⅝ inches on its cutting edge, is shaped like the ordinary amputating knife, which makes it much stronger than the usual model. The medium-sized scalpel is after Charrière's; the small scalpel has a round edge. The curved bistoury probe pointed is full length, and by means of two strips of adhesive plaster can be converted into a hernia knife. The grooved exploring needle is gilt, which will not stain or tarnish on contact with purulent fluids. The curved needle will be found useful where sutures have to be inserted deeply in fleshy parts. Weir's scarifier and lancet is a perfect little instrument, though of course carrying with it the objections urged against any permanent vaccinator. The caustic case is of aluminum, and contains in its other end an eye spud. This particular pattern was suggested by Dr. W. E. Briggs as being safer in the hands of the non-specialist than most forms. The trocar and canula is of medium size, permitting it to be also used for exploring purposes. The shape of the handle was adopted to save space in packing. The bullet forceps, being contained in a pocket-case, is of necessity short, but will often be found of sufficient length. It is useful, as suggested by Dr. F. H. Brown (Boston *Medical and Surgical Journal*), in removing foreign bodies from the ear and nose. By an ingenious arrangement the jaws have a separate action, and can be divaricated independent of the handles quite widely without distending the passage or sinus. A small catch makes the instrument self-gripping, and provides a useful dressing forceps. The scissors have one probe and one sharp point; this is to be preferred to the blunt-pointed variety. The relative length of the blades to the handles, ⅓ to ⅔, by providing good leverage enables them to cut firmly and to the point. Like the bullet forceps, they are provided with open rings to economize space. The combined aneurism needle and tenaculum is of steel, and, I trust, more generally serviceable than those we usually find in pocket-cases. The curve of the needle is Charrière's, and that of the tenaculum an average of several models, permitting it to rest comfortably on the index finger at an angle of forty-five degrees when tying. The director of steel has an end like that of the ordinary scalpel handle for separating tissues, and as this is often required when the director is in use, it will be found a very handy combination. The catheter, in two pieces, is Gross' metallic flexible, fitted so that the parts slide over each other; it is conical pointed, which will often facilitate introduction. The probes consist of a small double-ended silver one; the ordinary silver probe made extra heavy, and provided with a female screw at one end; Nélaton's probe, made of flexible steel, a useful modification of Dr. C. This has a male screw cut in one end; an eyed probe, silver, with slot cut to use as a porte meche, the other end furnished with a male screw. These, when fitted together, form a long silver bullet probe, and a Nélaton's probe with reversible silver end. The case is of Morocco leather, unlined except where the blades rest, silk being there used in preference to velvet as less likely to take the dust. It measures when closed 5¼ inches in length, 3 inches in breadth, and ¾ of an inch in thickness, and fastens with a long flap, bringing the lock on the edge of the case, a position less likely to injure the pocket. It is two-fold, with one pocket. The caustic case is carried inside the flap, the catheter on the hinge. One side is devoted to the instruments; the other, lined with silk, takes the extra blades, a piece of undressed kid being fastened under the covering flaps, which meet, so as to effectually protect them.

As will be seen, many of the instruments and models are those now in use. All I claim is originality in the selection and arrangement. Messrs. Geo. Tiemann & Co. have rendered me most valuable assistance by many hints and suggestions, the result of their extensive experience. Too much credit could not be given them for designing and making several of the instruments from very imperfect descriptions and sketches.

MEDICAL PROGRESS.

SURGERY.

Union of Divided Nerves by Splicing.—A. L. Rawa publishes (*Centralbl. f. Chir.*, Glasgow *M. J.*) the results of a large series of experiments on nerve suture by a new method. It often happens that divided nerves stitched together by either the direct or the perineurotic method are torn apart again, especially if they have to be stretched to any extent to make good loss of nerve tissue. Rawa's experiments were made upon animals, and in these the two ends of the divided nerves were laid side by side, riding sufficiently to allow of a single ligature being tied around them. In some of the cases the experiment was varied by drawing out the two ends a little, turning up the two ends at right angles to the nerve,

and whipping them together in that position. In a few of the animals more than one nerve of a limb was divided, and the peripheral end of the one nerve tied to the central end of the other, or the peripheral ends of two nerves to the central end of one.

In all cases it was found that in course of time the function of the divided nerves was restored, but that it took longer time (from six to twenty months) to restore it. The author gives details of the macroscopic and microscopic appearances of the nerves at various stages.

Rawa believes this method will be found useful in cases where a considerable portion of a nerve has been destroyed by an injury, or has to be removed during an operation, or where sutures have been tried and have torn through the tissues. Again where, as in operations for removal of tumors, etc., several nerves have to be divided, or part of a plexus removed, it may be possible to splice remaining portions of nerves together in such a way as to avoid loss of motion in the muscles supplied.

CORROSIVE SUBLIMATE AS A SURGICAL DRESSING.—Sir Joseph Lister delivered an address on this subject before the Medical Society of London. He has had recently several instances of results deviating from what he considered the normal type in aseptic wounds; in one instance a fatal result occurred from a form of spurious septicæmia, such as he had not seen for many a year. This was the only fatal case he had had, but other cases with delayed union and pus formation had occurred, undoubtedly of a septic character, that is to say, dependent upon the development of micro-organism, although in none of the cases was there any offensive smell. Lately he had been using eucalyptus gauze; and owing to the great volatility of the eucalyptus oil, he had come to think that so much of it volatilised during the manufacture and drying of the gauze as to lessen materially its protective power. Formerly he had used dammar gum as holding the oil more securely than ordinary resin, but dammar was very expensive. After some further trials with resin, he had felt justified in substituting the cheaper material; recently, however, the results had proved far from satisfactory. He found, further, that the manufacturer had deviated from his instructions, and had left the gauze exposed to the air for a longer period than formerly, and it was to be feared that much of the eucalyptus oil had evaporated away. He had little doubt that the untoward results he had just referred to were due to imperfections in the manufacture and quality of the gauze he had been using. Volatile substances doubtless had many advantages, but also very many disadvantages; thus dressings became less and less antiseptic the longer they were worn, and they were also much at the mercy of the manufacturer. He pointed out the capabilities of some non-volatile substances, such as salicylic acid and iodoform. As to corrosive sublimate, Dr. Koch had shown the remarkable germicide action which the sublimate exerted on all forms of low organisms, including the bacillus anthracis, the spores of which were among the most resistant. Koch had ascertained that a solution of sublimate, 1–20,000, was adequate to absolutely destroy the vitality of the spores of the bacillus anthracis. The wood-wool dressing of Germany was a very unwieldy form of dressing, on account of the bulk required. Lister has found that corrosive sublimate formed with serum of the blood a compound which retained the antiseptic properties of the corrosive sublimate. Under such circumstances it was not an albuminate of mercury in a chemical sense, but an albuminate of the compound corrosive sublimate; and this was a matter of great interest to the surgeon, for it was not only innocuous as regards the skin, but thoroughly antiseptic in its properties. Thus the discharges from a wound, in passing through a sublimate dressing, became associated with, but not precipitated by, the contained sublimate, and the sublimate in this way was rendered very much milder in its action, and could, therefore, be applied in a more concentrated form. With blood serum, 1 part in 70, or in 50, or in 30, it was perfectly amalgamated, and when dried gave off no deposit or crystalline separation whatever; it was free from smell, and applied to the skin was quite unirritating. He had found it thoroughly trustworthy as an antiseptic, and quite equal to freshly prepared carbolic gauze. French charpie, made of old rags, might be saturated with the solution, and would then form a very efficient and cheap dressing. If serum were treated with a certain proportion of sublimate, not sufficient to make it solid, it could be kept for an indefinite time. Perhaps one day sublimated serum might come to be an article of commerce, to be used in hospital and private practice. Perhaps even, dried and powdered, it might come to be mixed with vaseline, and used as an ointment, or be scattered over wounds as iodoform powder was used at the present time.

PERFORATION OF THE BOWEL FROM BIMANUAL EXAMINATION OF THE UTERUS.—Dr. E. Schwartz, of Halle, relates (*Centralbl. für Gyn.*, Glasgow *Med. Jour.*) an interesting case of where, in a woman 46 years of age, he made a bimanual examination of a uterus containing a fibroid tumor as large as a child's head. For some years he had kept down menorrhagia by the use of the curette and astringent injections, but ascites appeared, and the patient became cachectic. Fearing malignant degeneration, he determined to examine the interior of the uterus after dilatation of the cervix by a laminaria tent. Before inserting the tent, a one in a thousand watery solution of corrosive sublimate was injected into the uterus. Immediately thereafter the patient became sick, and was taken to bed without anything further being done. An hour afterwards she had a severe rigor, and the pulse rose to 140. There was severe retching and diarrhœa, with the passage of 18 ounces of blood from the rectum. The abdomen became greatly swollen, and death occurred from collapse in 40 hours. The diagnosis made during life was that of poisoning from corrosive sublimate, due to the solution finding its way into the peritoneal cavity through some diseased part of the uterine wall. At the autopsy the uterus was found intact. Pus, blood

and fæcal matters were found in the abdominal cavity, and also a pea-sized perforation of the bowel a little above the ileo-cæcal valve. Many old adhesions existed, and a fragment on the posterior wall of the uterus was observed to correspond to the perforation in the bowel. One of the kidneys was examined for mercury, but none was found in it. It thus appeared that death had resulted from the tearing of the adhesion binding the posterior wall of the fundus to the bowel lying behind, and this most probably happened (when the fundus was drawn forwards) during the bimanual examination, made immediately before the injection of the corrosive sublimate solution.

Introduction and Extraction of Needles.—M. Despris, in a lecture which he delivered at La Charité (*Gazette Médicale, Med. Times*) made some interesting observations. A young woman, striking a table with the palm of her hand, thrust a needle into the base of her middle finger and this, striking against the first phalanx, broke and became fixed there. When seen two days afterwards, the fragment of needle had completely disappeared amidst the inflamed tissues. On pressing at the base of the middle finger, however, a foreign body, pressure on which occasioned pain, could be felt. An incision was made at this point, and a fragment of needle, measuring 1½ centimetres, removed by the forceps. Here the incision was justified by the fact that the foreign body was firmly fixed. The subject of a second case was a young woman, into whose breast a needle was driven obliquely by a blow, and entirely disappeared under the skin. Guided by the patient the presence of the needle could be ascertained; but in this case an incision for its removal would be improper, for the integuments of the breast are so mobile that an incision made in the skin would not correspond to the foreign body. The presence of the needle having been exactly determined, we should seize it in its length and make pressure on its two ends. At one of these we may perceive a slight cracking sound, and here the patient also feels a sharper pain than elsewhere, and this is the point of the needle. If we now press firmly upon the other end this point will be forced through the integument and can then be seized with a forceps. An incision should never be made except when the body is fixed in the tissues, as in the first case. One caution must be borne in mind, and that is, we should never attempt an extraction on the mere statement of the patient that a needle is present in the tissues, and when we are unable to verify its presence; for sometimes persons declare that they have needles in their tissues when they have not; or when we are consulted the needle may have already migrated to another part of the body, this migration sometimes taking place very rapidly.

MEDICINE.

Perception of Sound in Auscultation (*The Stethescope as a Conductor of Sound.*)—Haupt, in the *Aerztlishes Intelligenzblate* (*Medical Chronicle*), shows that while the tubular shape of the stethescope may have led the unwary in the opinion that it conducts sound like a speaking tube, the vibrations started by heart and lungs are incompetent to impart audible vibrations to a light medium like air, but can do so to a denser medium like wood or the solid skull, which may be placed in contact with the chest wall. Hence it is merely the wood, and not the air in the tubular passage of the stethescope, which conducts sound; and conduction is more perfect the larger the surfaces of the instrument applied to the ear and chest wall. At the same time an ordinary stethescope has certain properties of a resonator: (1) by virtue of its being an open tube, (2) by virtue of its wide ear-plates, which may act on occasion as a sounding board. As a hollow resonator the stethescope is a very weak instrument, being limited in its range, as a rule, to the fundamental tone and the first overtone. By means of the ear-plate as a sound-board it is somewhat more efficient, and we can sometimes detect chest murmurs while the ear is held at some distance from the instrument, without touching it. *But both these aids are lost as we use the instrument;* for the tube no longer acts as a resonator when we block up both ends of it, and the vibrations of the ear-plate are checked by applying the ear to it. In short, the bore of the stethescope is quite superfluous, and a solid "hearing staff," with a wide ear-piece and a wide chest-piece, is the theoretically perfect instrument.

The Coagulation of the Blood.—Dr. Richard Norris considers this subject at some length in his address as President of the Birmingham Philosophical Society. (*Birmingham Medical Review*). As the result of his investigations he affirms that changes in the fugitive discs, by which term he includes the advanced lymph discs, the colorless discs, and all the intermediate forms up to the diffused-edged corpuscles, and also the free nuclei of the white corpuscles, are competent to cause the formation of fibrine without the aid of the hypothesis that the liquid of the blood holds in solution fibrinogen and fibrinoplastin which unite under the influence of a ferment to form fibrine. At the outset he accepts the truth of Rindfleisch's statement, that "recent fibrine is invisible under the microscope, owing to its great homogeneity and transparency." The entire process of coagulation, as it occurs in the blood, may be thus summarized:

1. The young discs are insoluble in the liquor sanguinis or in ¾ per cent. salt solution.

2. Without any apparent change, save that which induces adhesiveness and viscosity, they become converted into fibres.

3. These fibres, and the young discs which give rise to them, appear to possess the properties of *plasmine*, for they are soluble in a sufficiently dilute salt solution, say ¼ per cent., as seen when the corpuscles or fibres absorb vapor in a bubble space.

4. After a time these fibres become no longer soluble in ¼ per cent. salt solution, or in aqueous vapor, and this insolubility comes on by continued contact with the liquid of the blood.

5. This insolubility, which represents the transmu-

tation of plasmine into fibrine, is probably affected by water, which acts by decomposing plasmine and dissolving up the products of this decomposition, viz., fibrino-plastine and ferment.

The fundamental error which vitiates all the experiments made to prove the presence of fibrinogen and fibrino-plastine is the erroneous belief that by ordinary filtration or subsidence the whole of the morphological elements of the blood can be got rid of. 1. Absolutely pure liquor sanguinis obtained in this way does not coagulate, nor do any fibrils form in it. 2. When a saturated solution of common salt is added to it, and evaporation allowed to take place till crystalization of the salt occurs, no precipitate is formed; so that *plasmine* does not really exist in the true liquid of the blood. 3. Finally, plasma obtained in the ordinary manner by subsidence, if submitted to capillary filtration, may be separated from the substance which induces coagulation. The same is true of lymph.

The whole of the morphological elements can be removed from any kind of blood by diluting it into ¾ per cent. solution of sodium chloride at 0° C. sufficiently to destroy the viscosity caused by the presence of albumen, and maintaining the freezing temperature till subsidence of the capsules has occurred. Under these circumstances we find that the red discs sink first and take the lower place, the intermediate partially colored discs next, and the colorless last. Above these is a brilliantly clear liquid. Now where does coagulation occur? Not throughout the liquid, as it should do if the coagulable material were in solution, but in the upper layer of corpuscles, while the clear supernatant liquid, if removed by a pipette and placed in a separate vessel, shows no disposition whatever to coagulate. This experiment demonstrates, in the most unequivocal manner, that the material which coagulates is under the influence of gravity and can not, therefore, be in solution.

TRANSMISSION OF PHTHISIS.—At the late meeting of the Hygienic Congress at the Hague, two important communications were read on this subject (*Progres Medical, Medical Times.*) In the first of these Prof. Corradi, of Pavia, draws the following conclusions: 1. That the contagion of pulmonary phthisis is possible. 2. Prolonged cohabitation is one of the principal conditions of its occurrence. 3. Debility and all causes which diminish the power of organic resistance render it more easy. 4. The possibility of transmission through the medium of clothing, goods, etc., has not been sufficiently proved. 5. It is also doubtful whether the milk or flesh of tuberculous animals can give rise to the transmission, especially after culinary preparations. 6. That, at present, regulation of cohabitation is the only prophylactic measure that can be had recourse to. 7. Investigations should be continued in different countries, with the aid of a uniform formula.

The other paper was a report from M. Vallin, on the "Danger of Alimentation by Means of the Flesh and Milk of Tuberculous Animals," of which these are the conclusions: 1. The tuberculosis of animals is specifically identical with human tuberculosis. 2. It has been proved that the ingestion of raw tuberculous matters may engender tuberculosis. 3. The injection under the skin or into the peritoneum of the blood or muscular juices of phthisical animals, is capable of determining phthisis. 4. The ingestion of the raw flesh of phthisical animals is capable, in certain cases, of transmitting the disease, and especially abdominal tuberculosis. 5. The inoculability of tubercle is not destroyed, except by a notably higher temperature than that attained by the central portions of roasted meats. 6. The milk of phthisical cows may transmit tuberculosis, and is especially dangerous when the mammary glands are tuberculous. 7. Boiled tuberculous milk is harmless. 8. In order to guard against all danger, we should, at all events, provisionally prohibit the use of meat of animals, the subjects of confirmed generalized tuberculosis, with commencing emaciation. 9. The habit of eating underdone meats should be discouraged, and, as a matter of security, milk should always be boiled. 10. Attempts should be made to diminish the frequency of tuberculosis in animals by choice in breeding, improved stalling, isolation of infected animals, disinfection of contaminated stalls, etc. 11. Tuberculosis of horned cattle should be ranged among contagious diseases affecting them, and submitted to the laws applicable to these. 12. Assurance societies against tuberculous cattle should be encouraged, in order to indemnify the proprietors for losses from this cause.

PEPTONISATION.—An important contribution to the physiology of albumins has recently appeared from the pen of Herr Chandelon. It is well known that peroxide of hydrogen is decomposed with the evolution of oxygen in the presence of fibrin and organized tissue as well as of several metals and oxides, and it has generally been stated that this dissociation takes place without the albuminoids or metals undergoing any change. No evolution of oxygen occurs when other organic substances are brought into contact with the peroxide of hydrogen. Herr Chandelon suspected that in this latter case there might be a reaction, though it was not perceptible because the oxygen was used up in oxidizing the organic matter. In order to test this suspicion, egg albumen was suspended in water and exposed to the action of nascent peroxide of hydrogen. At first sight there was no result, for neither leucin nor tyrosin was detected. Nevertheless, it was observed that the albumen had undergone some change, in that the volume of the precipitate produced by boiling the mixture gradually diminished, whilst the liquid after separation of the coagulum by filtration gave upon treatment with alcohol a copious precipitate, which, upon being redissolved in water, gave all the reactions of an albuminoid substance. Further investigation left no doubt that the albumen had, partly at least, been converted into peptone; it was therefore of interest to study the reaction more closely, to isolate and identify the intermediate products. Herr Chandelon found that peroxide of hydrogen in the

nascent state peptonises egg albumen, and peptonisation may be considered a phenomenon of hydration, an opinion that is supported by the formation of peptone from albumen by reagents capable of fixing water, such as dilute acids, alkalies, etc., and the reconversion of peptone into albumen by a dehydrating material like acetic anhydride. It is suggested that the albumen (anhydride) gives up an atom of oxygen to the peroxide ($H_2 O_2$), just as oxide of silver does, and that the two groups that had been united by the oxygen then combine with two hydroxyls. The conversion takes place by the same process as in digestion with peptic ferments. The author puts forward the hypothesis that the digestive ferments promote digestion by the production of peroxide of hydrogen. —*Lancet.*

THE CONDITION OF THE FUNDUS OCULI IN INSANE INDIVIDUALS.—Drs. J. Wigglesworth and T. H. Bickerton have published, in two recent numbers of *Brain*, the results of investigations at the Rainhill Asylum extending over a period of two and a half years. There were 313 patients satisfactorily examined; of these 66 were general paralytics and 247 non-paralytics. Among the latter (mania, 82 cases; melancholia, 49; mental stupor, 2; dementia, 61; epilepsy, 48; imbecility without epilepsy, 5). The optic discs and main retinal vessels were perfectly normal in 83 per cent., and among the remaining 17 per cent. the changes were in some cases doubtful, and in some others were clearly due to causes, such as Bright's disease, which had no direct connection with the patients' lunacy. Among the general paralytics, decided changes were present in 23 per cent., and if to these cases be added a few more in which the existence of change was doubtful, the percentage rises to 35. They come to the following conclusions:

1, That in insanity proper (including all forms *other than general paralysis*) changes in the fundus oculi are found in a small minority of cases; but that when allowance is made for changes depending upon associated constitutional conditions, errors of refraction, etc., the number of cases in which a connection between the mental (cerebral) state, and the accompanying change in the fundus oculi, can be so much as suspected, is very small.

2. As a corollary, that in insanity proper no connection can be traced between the condition of the fundus oculi and the patient's mental state.

3. That in the majority of cases of "General Paralysis of the Insane," the fundus oculi presents a perfectly healthy appearance.

4. That in a minority of cases clear and precise lesions are found.

5. That these lesions fall into two main classes, the one tending in the direction of slight neuritis, the other in that of atrophy.

6. That in the former class the affection declares itself as a hyperæmia of the discs, the edges being softened and indistinct, so that in some cases they can be traced with difficulty or not at all; and that these conditions tend if the patient live long enough to be replaced by atrophy, so that at length the complete disorganization of the nerve may take place. The changes are essentially chronic in their course.

7. That though atrophy of the optic nerves may thus succeed to a slight chronic interstitial neuritis, it is also not unfrequently primary *at the disc;* the atrophy may be complete, the patient becoming quite blind.

8. That the pathological basis underlying the appearances of slight neuritis may be broadly characterized as a tendency to overgrowth in the connective elements of the nerve; the trabeculæ not only getting greatly hypertrophied, but the neuroglia corpuscles also becoming very large and numerous; these parts thus grow at the expense of the nervous elements, which subsequently atrophy.

9. That in the cases of primary atrophy, the pathological appearances eventually reached, though somewhat similar, may possibly take place in the reverse order *at the disc;* the nerve fibres being the first to dwindle, and the fibrous elements, trabeculæ, etc., subsequently taking on increased growth.

10. That in a considerable proportion of the cases in which atrophy of the optic discs is met with, spinal symptoms are prominent in the disease, these symptoms pointing in the direction of posterior or lateral sclerosis of the cord; but that this connection is by no means invariable.

Among these cases, having an average age of 55 years, 13,7 per cent., presented opacities of the lens, slight or considerable, which is a much higher percentage than would be found in the population at large of the same average age, and furnishes an illustration of the general impairment of nutrition common in the insane.

A HAIRY VACCINATION.—M. P. Diday (*Lyon Medical*) describes the case of a healthy child of 11½ months, that was vaccinated with animal vaccine furnished by the municipality of Lyon. The matter was introduced by two punctures on the anterior surface of the middle third of each thigh. The local inflammation was quite considerable, but the vesicle developed regularly and ran its proper course. Sixty days later, however, a crown of hairs made its appearance about the cicatrix. From being delicate, downy and nearly colorless at first, they soon took on length, color and body. Four months later there was presented the curious spectacle of a still reddish cicatrix surrounded by a double and triple row of hairs of 6 to 8 millimeters in length, the color of which, like the hairs of a red cow, stood out in bold contrast against the absolutely smooth skin of the child. The plate which carried the matter, being carefully examined, was found to contain three or four very small hairs visible to the naked eye.

THE value of crushed ice as a dressing for burns and scalds first pointed out by Sir James Earle, is confirmed by Dr. Richardson. The ice, after being reduced by crushing or scraping to a fine state of division as dry as possible, is mixed with fresh lard into a paste, which is placed in a thin cambric bag and laid upon the burn. This is said to banish all pain until the mixture has so far melted that a fresh dressing is necessary.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

SUBSCRIPTION PRICE, INCLUDING POSTAGE.

PER ANNUM, IN ADVANCE..... $5,00.
SINGLE COPIES..... 10 CENTS.

Subscriptions may begin at any date. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made at the risk of the publishers, by forwarding in REGISTERED letters.

Address

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 65 RANDOLPH STREET,
CHICAGO, ILLINOIS

SATURDAY, JANUARY 3, 1885.

EXPLANATION.—The issue of the 26th number of volume three, dated December 27th, was delayed several days by the failure of a single galley of proof to be delivered at the proper time, through the post-office. The list of names of Permanent Members published in compliance with the by-laws of the Association, every third year, also occupied two pages more than was expected, and consequently crowded out the few editorial paragraphs prepared for that number. The title page and very full index to the volume, which are so placed in the middle of the number that they can be readily removed and placed in front of the volume by the binder, and the convenience, for reference, of the complete list of members of the American Medical Association, will make the number a very valuable one, notwithstanding the absence of all ordinary reading matter. All but a very few of the papers presented in the several Sections of the Association during the recent meeting in Washington, have now been published in full in the JOURNAL, many of them accompanied by interesting discussions. The publication of the few that are left, will be completed in the next three or four weeks; but the valuable papers from other sources already accumulating on our hands, and the more extensive arrangements for reports and correspondence from the chief medical centres, both in this country and in Europe, furnish ample guarantee that the pages of the JOURNAL will continue to be filled with matter of interest and importance to those engaged in every department of the profession. As the present number commences another volume, this is a good time for new subscribers to send in their names and money for the year 1885.

PULMONARY SYPHILIS.—This is a manifestation of syphilis which it is safe to assume few general practitioners have ever recognized. This is due both to the rarity of its occurrence in adults, and to the difficulty attending its positive diagnosis. The occurrence of a syphilitic form of phthisis was recognized by Morgagni, while Portal, Morton, Graves and Stokes admitted the likelihood of such a condition, from their observation of the clinical fact that some cases of bronchial catarrh were greatly benefited by mercury. It was, however, left to Virchow, Wagner, Lorain, Robin and other contemporaneous investigators to describe minutely the pathological changes due to pulmonary syphilis. Their researches were made chiefly upon the lungs of still-born syphilitic infants. The latest contribution to this subject is by Dr. A. Hiller, in the Charité Annalen, Berlin, 1884, volume 9, page 184, and recapitulated in *Centralbl. f. d. Med. Wiss.*, October 4, 1884, page 702, as follows: The anatomical appearances of pulmonary syphilis described by most pathologists are an increase of the interlobular and interalveolar connective tissue, resulting in induration of the part, with, in rare instances, retractions and wrinklings of the surface, the lobulated lung (*gelappte lunge*) of the Germans. In addition, gummata are found, either isolated or in groups from the size of a hempseed to that of a goose's egg. Hiller doubts the occurrence, as stated by some, of a syphilitic infiltration of an entire lobe, similar to that of croupous pneumonia. On the other hand, he coincides with Virchow, Webber, Lorain and Robin in recognizing a process known as "white hepatization," which is analogous to the catarrhal pneumonia of children, and may occur in adults as well as newly-born infants. In this condition, it will be remembered, the terminal bronchioles and alveoli are distended with altered epithelial cells. Wagner, on the contrary, holds that the alveolar walls thicken and gradually obliterate the alveolar spaces, without the epithelia taking part in the process. In some instances this cellular infiltration is complicated by an œdematous saturation of the parenchyma, constituting what is known as a gelatinous infiltration. The cavities not uncommonly found in syphilitic lungs Dr. Hiller regards as bronchiectatic, herein differing widely from the view generally entertained, viz.: that they are the result of the breaking down and expectoration of gummata.

Some writers have described an acute form of phthisis syphilitica which manifests itself by a rapid disintegration of the pulmonary tissue, like that of tuberculosis. Dr. Hiller, however, after a critical perusal of the literature of the subject, draws the

conclusion that, in the cases hitherto reported as instances of rapid syphilitic consumption, adequate proof is wanting of there having been a real ulcerative destruction of the lung structures, the same as takes place in pulmonary tuberculosis, and hence that a rapid consumption of the lungs from syphilis does not exist. He regards the cases in which the diagnosis was confirmed by an autopsy as nothing more than a combination of constitutional syphilis with true tuberculosis, and thinks that where cavities were found, they were bronchiectatic. Dr. Hiller has collected and tabulated all of the published cases, 87 in number, in which a post-mortem examination is recorded. Of these, 29 are regarded by him as having been either genuine tuberculosis or a combination of it with syphilis or cancer. The remaining 58 were undoubtedly examples of syphilitic phthisis. In typical cases the most constant pathological changes consisted of that increase of the interlobular and interalveolar connective tissue already mentioned, or of fibrous induration of that portion alone of the pulmonary structure immediately surrounding the bronchial tubes. Next in the order of their frequency were found diffuse lobular consolidation, gummata, and circumscribed patches of peribronchial thickening, called by the Germans "nodular bronchopneumonia." In non-typical cases, there had existed a pneumonia either of traumatic origin, as set up by foreign bodies in the air passages, or a croupous pneumonia which had been modified by the preëxisting syphilis.

The author then details two cases occurring in his own practice of genuine syphilitic phthisis, in which he was able to watch the progress of the disease to the end, and to obtain post-mortem examinations. Although there were the usual symptoms of a pulmonary complaint—emaciation, cough, dyspnœa, etc., the course of the disease did not correspond with that of tubercular consumption. The anatomical characters were likewise found to differ from those of tuberculosis, agreeing fully with those of syphilitic phthisis already described.

The diagnosis of pulmonary syphilis can never be determined, *intra vitam*, with absolute certainty, but only conjectured if there exist at the same time the characteristic lesions of constitutional syphilis. To this end laryngoscopical and rhinoscopical examinations should never be omitted. In differentiating between a given case of suspected phthisis syphilitica and tuberculosis, the detection of tubercular bacilli in the *sputum* would, in Dr. Hiller's opinion, decide the question.

Lancereaux considered a case of phthisis as syphilitic if, in addition to the presence of characteristic lesions of the mucous membranes, the pulmonary affection was unilateral, with signs of consolidation, and it might be of excavation. But Wilson Fox justly remarks that a syphilitic disease of the lungs may be bilateral.

Syphilitic phthisis possesses great therapeutical interest. Some clinicians have seen marked benefit result from the administration of mercury and iodide of potassium, while others have noted no improvement.

In a case of this affection which we had the privilege of observing in von Ziemssen's clinic at Munich, the process was situated in the middle lobe of the right lung, and Ziemssen then remarked that according to his experience this was the most frequent site. Probably no weight is to be attached to this statement.

Missing Numbers of the Journal.—As the preceding number completed volume three of the Journal of the Association, it is a good time for every member and subscriber to look carefully over his file, and see if it is complete and all the numbers in good order. If not, send us a postal card at once, stating the *numbers* missing or injured, and we will supply them without delay. It is much more convenient for us to do this now, before the extra numbers of the volume are tied up and put out of the way, and there is much greater certainty that numbers wanted are at our command than will be the case six or twelve months hence.

Fewer Medical Students in the Medical Colleges.—It is stated in some of our exchanges that there are not as many medical students, in the aggregate, attending the medical colleges throughout the country during the present winter as during the past two or three years. This is probably largely due to the extreme stringency in the monetary and business affairs of the country.

Ohio State Sanitary Association.—The Second Annual Meeting of this organization will be held at Columbus, Ohio, on February 5 and 6, 1885. Full programme for the meeting will be issued in due time by the Secretary, R. Harvey Reed, M.D., of Mansfield, Ohio.

Prof. Darling, for many years well known as an eminent teacher of Anatomy in the Medical Department of the University of New York, died on the 25th inst.

Dr. Edward Jarvis, one of the most philanthropic and deservedly eminent members of the profession in Massachusetts, recently died in Boston at the advanced age of 81 years.

SOCIETY PROCEEDINGS.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated meeting Thursday, Dec. 4, 1884. The President, R. A. Cleemann, M.D., in the chair.

Ovarian Tumor.—Dr. Drysdale presented a polycystic ovarian tumor which he had removed that morning. He had first seen the patient with Dr. C. R. Prall, May 5, 1884. She was a married lady, 59 years of age, pale, thin and delicate looking. She had had eight children, the youngest of whom was then sixteen years old. With some trifling exceptions her menstruation had been perfectly natural until two months before, since then she had had a constant and sometimes profuse discharge of blood from the vagina, which still continued. She first discovered the tumor in March, 1884.

On examination Dr. Drysdale found a semi-solid, smooth-walled, globular tumor, occupying the lower part of the abdomen and reaching nearly to the umbilicus. It was freely movable, did not fluctuate, but was elastic and a little tender to pressure. Vaginal examination revealed a lacerated cervix. The sound entered the uterus two and a half inches, taking a direction to the right of the tumor. On deep pressure the end of the sound could be felt at the lower part of the right border of the mass. While the sound was in the uterus the tumor could be moved freely without affecting it. Dr. Drysdale diagnosticated a multilocular ovarian tumor.

By the 5th of June, one month later, it reached nearly to the ensiform cartilage. From this time it increased rapidly in size, and when it was removed filled the abdomen, pressing the lower ribs outwards. It proved to be a multilocular tumor of the left ovary.

His object in bringing it before the Society was to obtain an opinion from the members as to the cause of a phenomenon which was observed in the early stage of the growth. When the patient first noticed the enlargement, she found that when she would lie on her right side, the tumor, as if lighter than the surrounding parts, would ascend to the left, and when on her left side, would rise to the right. She informed Dr. Prall of this and he naturally supposed she was mistaken, but a careful examination of the tumor while she changed her position verified her assertion. As the mass increased in size, this peculiar change of position ceased, and when the abdomen was opened nothing could be found to account for the singular behavior of the growth.

Dr. Parvin inquired about the length of the pedicle and the weight of the tumor.

Dr. Da Costa has a case under observation in which the condition of great mobility is present.

Dr. Drysdale replied that the pedicle was extremely short. The tumor weighed thirty-five pounds and was multilocular in character. At the time of its removal he could not determine any fluctuation. Every parovarian cyst is movable in its early stages, He intended to call attention to the peculiar and, to him, unaccountable motion of this particular cyst.

Dr. Chas. Meigs Wilson presented the histories of three cases in which the hydrochlorate of cocaine had been used with the hope of obtaining local analgesia, and reported negative results.

Malignant Disease of Ovaries, Cystic.—Dr. D. Longaker exhibited the specimens with the following history: The subject from whom this specimen was removed was a German woman, 63 years old. She had been married the last 27 years of her life, and was sterile. During the last five months she was under the care of Dr. Jos. S. Gibb, of this city, at whose request I first saw her and by whose kindness I am enabled to report the case. The menopause was established at fifty-three, ten years ago. The patient had always enjoyed fair health, but four years ago she again began to have a bloody discharge from the vagina. For this she consulted a doctor and was soon well again. The date of the onset of her last illness was indefinite. It was insidious, and the particular symptom for which she desired relief was inability to micturate; this was found to be due to suppression of the secretion of urine, as the bladder was empty. There was also decided interference with nutrition. Her appetite and strength failed rapidly. The urine was found to contain a very small amount of albumin. She had occasional nausea and bilious vomiting and diarrhœa. She suffered with pain in the left side of the abdomen. On examination the doctor discovered a hard tumor, nodulated, to the left of the uterus, projecting upwards into the left inguinal region, it was adherent and but slightly movable. She was first seen by me on Oct. 6. At this time she was in bed, suffered from orthopnœa and was unable to rest or lie down. Her abdominal cavity was greatly distended by a fluid which had accumulated rapidly in the previous three or four weeks. Œdema of the ankles had been noticed a few days before. Her general appearance was decidedly anæmic and cachectic. The abdomen was very tender to palpation, especially over the left inguinal and hypogastric regions. The flanks were bulging and were flat on percussion. The tumor could be indistinctly outlined, immobile, lying in contact with the left ilium, dipping down into the true pelvis behind and to the left of the uterus and distinct from it. The cervix had undergone senile absorption, but from the os externum a small polyp was found hanging in the vagina. Oct. 7 she was tapped, a large bucketful of a brownish-red fluid, of specific gravity 1020, was removed. On microscopic examination it was found to contain blood and various corpuscles and epithelium. (The ovarian cell was not found.) It contained paralbumin.

A more careful examination now revealed a circumscribed, clearly defined, firm, nodulated growth in the region already indicated. It was found adherent, and conld be only slightly displaced. It was of the size of a large fist. Palliative treatment was continued, but the patient's condition gradually grew worse. There was again a slight accumulation of fluid in the abdominal cavity. She was subject to attacks of bilious vomiting and diarrhœa alternated with constipation. There was no apparent increase

in the size of the tumor, and during this period pain was not a marked symptom. At no time was there acute suffering. She died of exhaustion, November 27.

Autopsy on the next day by Dr. Gibb, in the presence of and assisted by Dr. E. W. Holmes and myself. The subcutaneous fat had been almost entirely absorbed. The parietal peritonæum was covered with lymph, with numerous nodular elevations in various stages of organization. The intestines had contracted numerous adhesions.. The capsule of the liver was one-eighth inch thick. In the mesentery there were also deposits of lymph, some of which were more recent and less organized. The abdominal cavity contained about two quarts of fluid, the same as that already described.

On the left side, extending two inches above the pelvic brim, was found a tumor apparently solid, but which, on close examination, was found to be cystic. One of the largest of the cysts had ruptured—the opening was found at the posterior-inferior portion of the growth. It was not recent. The capacity of the emptied cyst was about four ounces. The tumor dipped down into the true pelvis between the broad and utero-sacral ligaments of the left side. It was adherent, and was removed with great difficulty. On incising and freely opening the cyst some coagulated fibrin was found, the remains of a hæmorrhage into the cavity. When it was entirely removed it was found to arise from the left ovary. The oviduct was slightly dilated, and its fimbriated extremity was adherent to and spread out over the tumor.

On the right side, in the broad ligament, there is a cyst slightly larger than the tumor. Its contents are dark and very dense. It is very heavy The cyst is surrounded by a dilated Fallopian tube containing a clear, transparent fluid of a bluish-white hue. At its widest part it is an inch in diameter. Behind and below this cyst is found the right ovary. It is adherent, flattened out and seems continuous with it. The entire specimen was carefully dissected out as it is shown. From its rapidly fatal tendency, with the macroscopic appearance of the tumor, there is very little doubt that a microscopic examination will reveal it to be malignant. Though, perhaps, possessing the greater pathological interest, there are also a few points in the case which may concern us in regard to diagnosis and treatment. Study of the fluid at first caused a suspicion that it came from a cyst. Its high specific gravity and the chemical tests to which it answered favored such a view. But this was entirely at variance with the history of rapid accumulation and absence of physical signs indicating the existence of a large cyst. It was apparent at the autopsy that an attempt at extirpation could only have hastened the fatal result. The specimen was referred to a committee for further investigation.

THE Cincinnati branch of the Western Society for the Suppression of Vice last year seized and destroyed over nine hundred pounds of obscene books and 165,900 pamphlets, circulars and cards, 1,100 photographs and 137 negatives.

STATE MEDICINE.

REPORT OF LAWS REGULATING THE PRACTICE OF MEDICINE IN THE UNITED STATES AND CANADA.

BY RICHARD J. DUNGLISON, A.M., M.D., OF PHILADELPHIA, PA., AND HENRY O. MARCY, A.M., M.D., OF BOSTON, MASS.

Read before the American Academy of Medicine, at its Annual Meeting at Baltimore, Md., Oct. 29, 1884; approved for publication by the Council.

Since the Annual Report of your committee was presented to the Academy, at its meeting in New York, in October, 1883, but little change has been effected in the legislation already operative in many of the States, or in the introduction of new laws regulating the practice of medicine in States or Territories in which the public were not already legally protected. Virginia is the only State in which a Legislature has, during the year past, contributed anything of general or special interest to the sanitarian or humanitarian in the restriction of unqualified practitioners.

In some of the States and Territories the Legislatures meet biennially, and have not, therefore, had the opportunity offered them of passing such measures as are urgently demanded in the interest of the public health. Whether they would accomplish anything remarkable in this direction, even if the most abundant opportunities were available, it would be impossible for any one, familiar or unfamiliar with the general uncertainty and crookedness of methods of legislation, to conjecture.

Under these circumstances, there being so little for your committee to report in regard to additional legislation restrictive of medical practice, it has seemed to them that it would be appropriate to take a brief glance at the present condition of the laws bearing upon the subject, and to secure an expression of the views of those actively interested in the various sections of the country in their efficient working. With this object an extended correspondence has been entered into with Governors and Secretaries of States and Territories, with Secretaries of State Boards of Health and of State Medical Societies, and with other gentlemen interested in measures of public sanitation, and the replies elicited offer an excellent medium for an intelligent appreciation of the condition of State legislation, at the present moment, on this important subject.

Dr. J. L. Cabell, of the University of Virginia, President of the National Board of Health, who kindly furnishes a copy of the new law, makes reference to the fact that in Virginia—

"Prior to the passage of this Act any person who chose to call himself a physician, and was assessed with a license tax as such, had any privilege that was accorded to regularly graduated physicians. The new Act has some defects, which it is hoped may be corrected by future legislation, but has one great merit, in requiring *all* candidates for practice, *whether graduates or not*, to undergo an examination by the Board of Medical Examiners, to be appointed by the Governor, on the nomination of the State Medical Society."

Dr. James E. Reeves, Secretary of the State Board of Health of West Virginia, asserts that—

"No statute passed by a Legislature was ever more heartily welcomed by the whole people than has been the law regulating the Practice of Medicine and Surgery in West Virginia. Its operation from the date of its passage, March 8, 1881, to the present, has been a continued success—a blessing to every citizen of the State, and a strong arm to uphold the dignity of the medical profession within our borders. No changes in the law are contemplated by our Board. We are satisfied to 'let well enough alone.'"

Dr. L. Julian Picot, Secretary of the State Medical Society of North Carolina, mentions, as a feature of the law in force in that State, that under its provisions—

"Practitioners are not allowed to collect bills by legal process unless licensed by the State Board of Medical Examiners. The Board is elected every six years by the State Medical Society. The present law is not satisfactory to the better class of the profession, nor will it be until it is made a misdemeanor to practice without a license. An effort will be made to secure the passage of an Act to this effect. If successful, then the profession of this State will be happy."

Dr. A. S. von Mansfelde, Permanent Secretary of the Nebraska State Medical Society, writes as follows:

"The law, as it now exists, is inoperative, because any infringement upon it becomes a criminal offence, the common law providing that, in such cases, the defendant shall be faced by the witnesses of the prosecution. To procure witnesses from distances, the places where bogus diplomas are manufactured, as, for an example, Philadelphia, Cincinnati and St. Louis would involve a cost to which neither individuals nor societies are equal; therefore, the failure of a law otherwise good enough. I shall surely introduce the Illinois law at the coming session of our Legislature, January, 1885, and have some hope of its passage."

Dr. C. C. Fite, Secretary of the Medical Society of the State of Tennessee, states that

"There are no laws of any kind on medical practice in Tennessee, and not likely to be soon, as the profession in this State is divided on the question. We have received a considerable addition to our ranks recently, by the enforcement of laws in other states forcing the 'ne'er do wells' to seek more hospitable climes, and Tennessee welcomes them all."

In commenting upon the working of the law regulating the practice of medicine in the State of Louisiana, Dr. Lucien F. Salomon, of New Orleans, writes thus intelligently and fully:

"The act now in force has several defects, which it would be well to point out.

"In the first place, section 3 allows the privilege of registration to persons who have been practicing in the State for more than *five* years prior to the passage of the act, regardless of qualification, and the result has been that every charlatan, quack, and unqualified person who pretends to practice medicine, or styles himself 'doctor,' has hastened to take advantage of and profit by this privilege, while many regular physicians, possessing diplomas from reputable colleges, have either refused or neglected to register; the neglect or refusal being, in a great measure, due to this provision, which places upon an equal footing with them irregulars, 'herb doctors,' quacks and impostors. Out of a total of 1,027 physicians in the State of Louisiana, 758 have registered, of whom 141 are without diplomas, and have been *legally* registered, after having made affidavit of five years' practice. In the City of New Orleans there are about 270 persons practicing or claiming to practice medicine. Of these, 237 have registered, 25 of whom are without diplomas. Of course, the defect existing in section 3 will, in time, correct itself. The legislature evidently did not intend to make the law retroactive, inasmuch as by so doing it was said that some who had been practicing without diplomas for many years might be deprived of their livelihood; but the evil has been saddled upon the people of the State by this saving clause, and there is no present remedy.

"Another grave and striking defect is found in section 6. This section provides that action shall be brought for violation of this act in the name and for the benefit of the Charity Hospital at New Orleans. But the Board of Administrators of the Charity Hospital have never attempted to prosecute, probably because, it may be, that they do not consider it within their province to do so, and probably because registration is demanded at the office of the State Board of Health; and until very recently no effort has been made on the part of the Board of Health to inform the proper officials of the Hospital of the names of persons practicing in violation of the law, and unless so done there is no way of reaching delinquents. Besides, the Charity Hospital (or any one else, for that matter) does not appear to be very desirous of prosecuting, for the law, while providing a penalty, prescribes no method of enforcement. The last line of Sec. 6 reads, 'he shall . . . be subject to criminal prosecution, and be punished in the manner prescribed by law for violations of this act.' Now this would answer very well, and make the law effective were any such prosecution provided for; but, unfortunately, nowhere upon the statutes of Louisiana can any such provision be found, and, as a consequence, the law is to this extent inoperative. This is an oversight which the profession of the State, through the State Medical Society, has endeavored to have corrected, but at its last session the Legislature neglected or refused to make any amendments to the existing law or take any action whatever in regard to State Medicine. With a view to making the present law as effective as possible, and to endeavor to obtain a complete registration of physicians in the city of New Orleans, at least, I, as a member of the Committee on Registration of the Board of Health, a short time since introduced a resolution, which was unanimously adopted, providing for the enforcement of the act as far as could be done under existing circumstances. Said resolution provided that, under the provision of Sec. 6 of the act, the Board of Health would refuse to accept certificates of any nature whatsoever, or recognize the same as legal, when issued by any physician who had failed to register, or by any person whose name did not appear upon the books as having duly registered, in compliance with the law. (The Board of Health is by law constituted the registrar of births, marriages and deaths, for the city of New Orleans.) The result has been that since the adoption of this action by the Board 41 have registered, bringing the total number registered in New Orleans to the figure stated above, 237.

"At the same time the Secretary of the Board of Health was instructed to forward to the Administrators of the Charity Hospital the names of those persons practicing without having registered, with the request that the attorney of the Hospital be instructed to prosecute by civil action, and attempt to recover the prescribed fine for the benefit of the Hospital. But nothing has as yet been done to this end, nor has any reply to the request been received by the Board of Health. Were the power given to this Board to prosecute, I think that violations of the act would be less numerous, for the amount to be recovered in fines, and the desire to protect the public from unqualified and ignorant practitioners, would be an incentive for active measures. Still, taken all in all, the law as it now exists is a vast improvement upon our former condition, when there was nothing to deter peripatetic quacks and pretenders from gulling and fleecing a credulous public."

From Dr. G. D. Hersey, Secretary of the Rhode Island Medical Society, we learn that

"Through the efforts of the Society one much needed reform has been secured, by which the old coroner system has been abolished, and, instead, there has been instituted a system of Medical Examiners. The law went into effect July 1, 1884, and gives satisfaction."

Dr. E. P. Fraser, Secretary of the State Medical Society of Oregon, expresses the regret that they have no medical legislation whatever, as yet. They have a bill ready to present at the next session of the Legislature, and hope to secure its passage.

The prospects for successful medical legislation in

Massachusetts seem much more encouraging, now that the State Medical Society has interested itself actively in the matter, by entrusting it to the hands of a large and influential committee of that body. The effort to induce legislative action last winter failed, as it had previously done, but it is believed that the profession will now enter more earnestly into the prosecution of the work, with better prospects of success.

Dr. Walter Coles, of St. Louis, Missouri, writes as follows:—

"The law now in force is not all that might be desired, but was the best that could be secured by way of a start. It has served a good purpose in interesting the more progressive element of the profession in the importance of legal restrictions, etc., and will, undoubtedly, prove an efficient entering wedge to something better and more efficient, in the near future."

Dr. William Elmer, Jr., of Trenton, Corresponding Secretary of the State Medical Society of New Jersey, states that—

"The law works fairly well in this State, although there is no authorized power to prosecute offenders unless by individually assuming the trouble and unpleasantness therefrom resulting."

Dr. P. H. Millard, Secretary of the State Board of Medical Examiners of Minnesota, states that—

"In Minnesota the Supreme Court has very recently affirmed the constitutionality of the Act in all its features. This decision is important, as the Act is similar to those of Illinois, West Virginia and Missouri, and may influence and confirm the action of those States in the case of delinquents or of those answerable to the law. The law in Minnesota is said to be giving very general satisfaction."

Dr. J. P. Booth, Secretary of the Medical Society of New Mexico, speaking of the law which was passed in March, 1882, regards it as a good one, so far as it goes, but it does not go far enough.

"By it, those desiring to practice are required to present their diplomas for examination to the Board, or if they have no diplomas, to appear in person before the Board and undergo a satisfactory examination in Anatomy, Chemistry, Physiology, Surgery, Materia Medica and Therapeutics and Obstetrics. The Practice of Medicine is not included. The Board consists of three regulars, two homœopaths and two eclectics. The law paradoxically prescribes that this body, in its rulings and actions, shall be governed by the Code of Ethics of the American Medical Association. It is the aim of the Southern New Mexico Medical Association, of which I have the honor to be Secretary, to amend the law whenever it is possible to do so. Two years must elapse, however, before much can be done, as the present Legislature at its last session passed a law to retain their seats until 1886."

Dr. J. A. Dibrell, Jr., Secretary of the State Board of Health of Arkansas, does not speak in any terms of enthusiasm of the condition of medical legislation in that State. He states that—

"The present Act is by no means satisfactory. The medical profession of Arkansas, for a number of years, made efforts to secure the passage of a bill to regulate the practice of medicine. Such efforts were always defeated by the influence brought to bear by quacks upon the members of the Legislature. The bill, or act, now in force was passed in 1881, and it was thought it would be better than none at all, and that is about all that can be said in its favor."

Dr. M. W. Russell, Secretary of the New Hampshire State Medical Society, writes that the law of that State works very well, with but little friction, and gives general satisfaction.

Dr. Charles D. Smith, Secretary of the Maine Medical Association, states that efforts will doubtless be made by a committee of the State Medical Society to secure a law establishing a State Board of Health and Registration, at its next session.

Dr. J. S. Richmond, Secretary of the Vermont State Medical Society, writes as follows:—

"In 1876 a law was passed requiring practitioners of medicine to obtain a license of a Board of three Censors appointed by our State Society, or of a Board of Censors appointed by Chartered County Societies. In 1878 some *tinkering* was added. In 1880 our Society, not liking the law, did not appoint censors, intending to treat the law as a dead letter. Last June the law was brought before our semi-annual meeting. We found that the old Board of Censors, by the law, held their office until others were chosen. I have supplied the Board with blanks, and the profession very generally have a license. We anticipate that a State Board of Health, measures to enable us to control diseases, etc., will come before our Legislature, which meets Oct. 1, 1884."

Dr. W. G. Brownson, of New Canaan, Connecticut, writes that since our last annual report to the Academy—

"An attempt was made, with the view of suppressing irregular traveling and advertising quacks, but it was defeated in the Legislature. A bill making it a duty to label all patent and proprietary medicines, was also defeated."

Dr. George W. Cox, Secretary of the State Board of Medical Examiners of Colorado, expresses the belief that—

"The State Board of Health will endeavor to have more stringent laws passed at the next meeting of the Legislature."

Dr. W. J. Burt, Secretary of the Texas State Medical Association, writes to say that—

"The present law is not satisfactory, and the State Medical Association has drafted a bill which will be presented to the next Legislature, in January, 1885."

Dr. Hector Galloway, Secretary of the Dakota Medical Society, states that—

"An effort was made by our local society (Cass County Medical) to obtain from the last Legislature an Act similar to that of Pennsylvania, requiring registration, etc., but the consideration of it was not reached before the Legislature adjourned. An effort will probably be made next winter to have the matter taken up and considered."

Dr. J. T. Reeve, Secretary of the Wisconsin State Board of Health, writes as follows:—

"No change has been made in the laws which regulate the practice of medicine in this State since the date of the last meeting, except that a section of a new law requires medical men to report contagious diseases occurring in their practice. I am not aware of any movement looking to a change in the laws regulating the practice. There is, however, a growing interest in this subject, and an increasing belief that there ought to be greater restrictions upon the practice of medicine."

Dr. William Marshall, of Milford, Delaware, states that—

"The law of Delaware, now on the statute book, regulating the practice of medicine, is generally regarded."

The same remark may be made in regard to the law of California.

On the other hand, Dr. James A. Gray, of Atlanta, writes to say that—

"The law in force in Georgia is very unsatisfactory to a large number of the best physicians, and yet there seems to be little hope that anything better will be enacted in the near future."

Dr. E. S. Elder, Secretary of the Indiana State Board of Health, thinks it probable that—

"An effort will be made to pass a medical law at the next ses-

sion of the Legislature, in 1885. At present there is no law on the subject; simply a section of the State Board of Health law requires that physicians shall register their name and post-office address with the County Clerk."

Dr. John Forrest, Corresponding Secretary of the State Medical Society of South Carolina, writes as follows:

"The only law on the subject of Medical Practice which I know to be enforced in this State is a derogatory and contemptible enactment, which permits the municipal authorities to mulct us every January by an exorbitant tax called a license, notwithstanding that we have already been licensed by the State through its chartered institution, the Medical College. This relic of barbarism, I regret to say, is still in force, but I am not aware of any other regulation being strictly observed."

Dr. G. A. Collamer, Secretary of the Ohio State Medical Society, makes the following statement:

"No legislation in reference to medical affairs in Ohio has been completed since September, 1883, nor for many years previous. The only law on the statute-books which professes to demand any requirements, was passed some fifteen years ago. That law required that doctors should have a diploma; but practitioners of ten years' standing were exempted, and those of less than that time were given five years to obtain a diploma. Efforts have been made here to enforce this law, but it has been found impossible to prove before a court that the accused did *not* have a diploma, the legal assumption being that he did; so the law has proved useless, and all manner of quacks flourish on our soil. A bill was introduced into the Legislature last winter, the design of which was to establish a State Board of Medical Examiners, whose license should be required before engaging in practice. It failed to pass, and is now pending. The State Medical Society, at its last meeting, in June, recommended the passing of a bill also for a Board of Examiners, and appointed a special committee to assist in its passage through the Legislature.

"There is practically no legislative restriction on the practice of medicine in Ohio. Any one can and does practice medicine here."

Dr. James W. Holland, of Louisville, Ky., states that—

"The law on the statute-books in 1883 is still in force. In all but two or three out of a hundred counties it is a dead letter. The State Board of Health made an attempt to get a better law through last winter; it was defeated by prejudice excited by some Louisville medical schools. They will try again at the next Legislature, two years hence."

Dr. R. Lowry Sibbet, of Carlisle, Pa., writes as follows in regard to the practical working of the "Act to Provide for the Registration of all Practitioners of Medicine and Surgery" in Pennsylvania—

"I would say that the law is generally respected, and that no one, so far as I can learn, attempts to practice without registration. The prothonotary is interested to the extent of one dollar for each practitioner, and the practitioner is liable to a fine of one hundred dollars if he fails to register. These facts make the law self-acting. During the first year, 5,654 graduates had registered, representing 173 medical schools, and 838 non-graduates registered (See Reports of Committee on Medical Legislation, in the Transactions of the State Medical Society for 1882 and 1883). The latter class must necessarily diminish in numbers, as no one is permitted to register who was not engaged in practice in our commonwealth in 1871. It is conceded, however, that the supervision of registration is a necessity in order to secure higher attainments, and to prevent false registration, and this can be done most efficiently by a State Board of Health. The Committee on Medical Legislation asked to be dismissed in 1883, which was agreed to, and the State Board of Health Committee was continued. We hope that the legislation desired and so much needed will be secured in a few months."

The Committee cannot close this Report without emphasizing the fact, to which allusion was made in their Report of last year, of their great indebtedness to the efficient and indefatigable Secretary of the Illinois State Board of Health, Dr. John H. Rauch, for the recent valuable Report of that body, in which the whole subject of medical legislation in the United States and Canada is presented in all its details, for reference. Each act is given in full, exactly as adopted in each State, with all the recent changes in such legislation, and the work of all committees engaged in duties similar to that devolving upon this Committee of the American Academy of Medicine is, therefore, correspondingly lightened.

In this sketch, given as concisely as possible, of the present attitude of the States and Territories in regard to the restriction of medical practice, your committee believe that there is much to encourage friends of humanity and those most active in the promotion of public health; for although the past year has witnessed but one addition to the list of States willing or anxious to adopt measures for the protection of the public from unlicensed and unqualified practitioners, the most reliable acts already passed are generally operative, and in course of satisfactory execution. Time and the good example set by these States will undoubtedly have their influence in modifying the ill-advised and deficient legislation of other States. Correspondence with medical men in Canada has failed to elicit any novel information in relation to the restrictions of medical practice in that country, its laws being regarded as efficient, and probably not requiring any special modifications.

FOREIGN CORRESPONDENCE.

PARIS LETTER.

PARIS, December 3, 1884.

You will have learned of the decline of the cholera epidemic in Paris, and it may be interesting to take a retrospective view of it from its outbreak in the beginning of November. Dr. Emile Rivière read a paper at the meeting of the Academy of Sciences last week, in which he entered into a history of the epidemic, and of which the following is a summary: According to the reports published under the orders of the Prefect of Police, the first case of cholera was reported on the 4th of November. The next day six cases occurred, and were at once sent to the hospital, where five of them died next day. From the 5th to midnight of the 22d of November, 912 patients were conveyed to the hospitals (553 men and 359 women), 59 cases occurred in the hospitals, of which 18 were employés of these establishments, which make up a total of 971. Of this number 511 deaths were registered (302 men and 209 women); 239 patients were cured (129 men and 110 women). On the morning of the 23d of November, there remained 221 cholera patients under treatment. Taking the cases according to age, the persons mostly struck with the malady were aged from 31 to 41. The oldest was 85 years of

age, and the youngest three weeks old. The proportion of persons affected to that of the inhabitants was 4 in 10,000. According to trades and professions, those most affected were work people and servants; then came dressmakers and milliners; finally came the washerwomen, workers in metals, among whom were turners in copper. This last example, by the way, overthrows the theory of the late Dr. Bürg, who, it will be remembered, contended for nearly thirty years that copper was not only a preventive, but a curative agent in cholera. The districts that suffered the most were generally those that were the most populous, and consequently where filth and misery prevailed. Add to this intemperance, which is so rife among the working classes, and which offers a good soil for the development of the disease, for according to another author, of the proportion of cholera patients admitted to the hospitals, 60 per cent. were known to be addicted to drinking. The epidemic, however, seems to have been a very mild one from the beginning, and hopes are entertained that, thanks to the cold weather and sanitary measures so rigorously carried out, the disease will soon be completely extinguished.

It may be of interest to give the treatment that has been generally adopted in the Hospitals. The cholera patients are rubbed with pure alcohol or with camphorated spirits; bichloride of mercury, bismuth, and paregoric are administered internally according to the gravity of the disease. Hypordermic injections of morphia with or without the addition of atropine, have also been employed to relieve the cramps and retching so distressing in this affection. Professor Hayem has tried transfusion with a solution composed of chloride of sodium 5 grammes, sulphate of soda 10 grammes, distilled water 1 litre, which he injects into the vein at a temperature of 38° C., and which is repeated according to circumstances. The average quantity so injected was from 2 to 2½ litres for each patient, the operation being performed slowly in from 12 to 15 minutes, and the instrument used was an aspirating syringe. Dr. Hayem stated that of 200 cases that came under his care, 100 who had not been operated upon died, 75 succumbed in spite of the operation, and 25 were cured.

Among the prophylactic measures may be mentioned the boiling of all drinking water, the isolation of the patients and the thorough disinfection of everything that has been in contact with them. In the hospitals the clothes of cholera patients are fumigated in stoves heated to 120° C. (270° Fahr.) and their linen is further plunged into a saturated solution of chloride of zinc, but as this is apt to burn the linen the bichloride of mercury has been used instead as being not only a more efficient disinfectant, but it is also much less costly. The dejections are disinfected with sulphate of copper, but apparatus for burning them are to be established at all the hospitals as being the most effectual means of disinfection.

Dr. Hurean de Villeneuve lately read a paper before the Academy of Sciences in which he strongly recommended the use of distilled water for drinking purposes as being the surest means of avoiding contaminated water. After a personal experience of three years, Dr. Hurean de Villeneuve considers that distilled water is neither unpalatable nor difficult to digest, that it generally contains a sufficient quantity of air, and that the absence of calcareous salts is rather an advantage than a drawback.

At the same meeting of the Academy of Sciences Professor Germain Sée read a very interesting paper on the different forms of pneumonia. The learned professor stated that, supported by a long series of experiments, he does not hesitate to look upon pneumonia as a specific parasitic malady. He has been able to reproduce this form of pneumonia in animals, whereas its reproduction was impossible by irritating agents, whether physical or chemical, introduced into the lungs. This inflammation remains local, so long as the parasite does not go beyond the limits of the pulmonary apparatus—this he terms simple pneumonia. The disease extends and becomes general when the microbe invades the neighboring organs, or when it penetrates into the general circulation, either by the lymphatics, or by the vascular system—this he terms infecting pneumonia ("pneumonie infectante"). This parasitic pneumonia is absolutely distinct from the other forms of acute inflammation of the lungs, which are described under the name of capillary bronchitis or broncho-pneumonia. The microphytes, no doubt, also play a part in these cases, but it is only of a secondary character. These maladies are generally due to the influence of cold, and to the extension of the inflammation to the most minute ramifications of the air tubes even to the pulmonary cells. Capillary bronchitis develops itself in the course of an ordinary bronchitis resulting from cold, which has nothing definite in its evolution, is more common in childhood and old age, and is very rare in the adult, at which time of life parasitic pneumonia is more common. Contrary to capillary bronchitis, which is a grave malady, parasitic pneumonia has a course which is simple, mild, clearly defined, like that of small-pox, measles, etc. Its duration is comprised within fixed limits and does not pass over six to nine days. The malady is ushered in by severe hyperthermia, which lasts invariably about a week, and dominates during that time all the local manifestations, and all the pulmonary signs, then becomes suddenly extinguished, the more frequently on the seventh day, leaving the lungs during one or two weeks more with the remains of the inflammation. The consequences of this new idea of the pathogeny of pneumonia may be easily understood as regards treatment. As the parasitic evolution occupies seven days, it will suffice to aid the patient to get through this period without any accident. Consequently, Professor Sée disapproves of any strong measures, such as bleeding and tartar emetic, so frequently used in these cases. He admits only three indications: 1. To combat the fever by the aid of digitalis, quinine and derivatives. 2. To keep up the strength of the patient by the aid of alcohol. 3. To use all our efforts against inanition by means of alimentary drinks. This part of the treatment is sometimes called "expectation," but according to Professor Sée, it is perhaps the most important, and should therefore be rigorously carried out.

A. B.

DOMESTIC CORRESPONDENCE.

DETROIT, MICH., December 15, 1884.

TO THE EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

The JOURNAL of the 29th ult. contained a report of a case of "Unilocular Ovarian Cyst weighing ninety-five pounds, successfully removed by Dr. George E. Ranney, of Lansing, Michigan." In this report Dr. Ranney claims to have performed the operation, and generously gives Dr. Post, of Lansing, and myself, credit for valuable assistance which we rendered him. Inasmuch as the *Medical Age*, of this city, in its issue of October 25, contained a notice of this same case in which I was credited with having performed the operation, assisted by Dr. Ranney and others, the discrepancy has called forth sufficient comment to warrant, if not, indeed, to demand a statement from me. This statement I am constrained to make rather in the interest of truth and honesty than from a desire to enter into an unseemly controversy.

I was waited on by Dr. Ranney on the 6th of October last, and received from him a description of the case referred to, and a statement of his relations to it. He had assumed charge of it, and had advised an operation, which he had engaged himself to undertake. It was one the importance of which he fully realized, and the realization convinced him of the advisability of having present at the operation some operator of experience. In doing me the honor to request me to act in this capacity, it was expressly understood that, inasmuch as he had undertaken to perform the operation, he was to be permitted to identify himself therewith with sufficient prominence to satisfy the friends of the woman "that he was not a dead-head in the enterprise." The doctor's exact words, as I distinctly recall them, were: "I wish you to let me do as much as possible, for the family expect me to operate." On the strength of this request I considered myself engaged to operate. Had I thought of the possibility of his utilizing the case as the head of a list of possible future ovariotomies, I should certainly have declined any connection with it. I had known the doctor for about twenty years, and had learned to regard him highly as a citizen and as a general practitioner, but his fame as an ovariotomist had not been sufficiently established to warrant me in acting under his instructions in a case of the importance of that regarding which he consulted me, promised to be.

Pursuant to our engagement, I met Dr. Ranney at Grand Ledge on Oct. 8, and subsequently learned that the fact of my intended presence had been carefully kept from the knowledge of both the family of the woman and the local profession. But in view of our previous understanding I did not think this as strange as it might have seemed under ordinary circumstances. According to agreement, I had, furthermore, taken with me from my own office every instrument to be employed in the operation, even the sponges and the silk, which latter I had myself properly antisepsized by boiling, and not by means of carbolic acid, as one would infer from Dr. Ranney's statement it had been treated. Assistants, I submit, are not usually expected to furnish all the essentials to an operation. In addition to such antiseptic precautions as I took, the room, as stated by Dr. Ranney, was treated to a vigorous application of carbolized spray, produced, by the way, by my large Weir's Atomizer, which the doctor took with him from my office on the date of his call on me. I saw the patient for the first time when she was placed upon the table. Having made the necessary examination to confirm Dr. Ranney's diagnosis, she was etherized and I proceeded to make the abdominal incision. I then passed a sound over the tumor to determine the adhesions. I next introduced the trocar into the cyst, the walls of which were, however, so friable and the contents of which were so jelly-like as to prevent the evacuation by this means. The tumor, by the way, was multilocular instead of unilocular or monocystic, as, of course, any ovariotomist of experience would expect it to be from its size and after having discovered the peculiar consistency of its contents. Owing to the character of the tumor, the cyst was broken up and its contents were evacuated by the hands. On attempting the removal of the tumor the abdominal opening was found to be rather small, and under my direction Dr. Ranney enlarged it. After the tumor had been sufficiently reduced to permit its extraction, I applied Storer's clamp shield at the junction of the pedicle and the cyst. After this I passed a dull perineal needle, armed with the ligature, through the pedicle and secured the ligature with a Peaslee's chain knot. After severing the stump I cauterized the end thereof with my Paquelin's thermo-cautery which was heated by Dr. Post. This thermo-cautery is what Dr. Ranney in his report calls "a hot iron." After cauterization, the vessels of the stump (three in number) were felt to be pulsating so energetically beneath the ligature of the pedicle, as to lead me to believe it would be best to "make assurance doubly sure." I therefore seized the exposed ends and requested Dr. Ranney to ligate them. I would especially note the fact, that the cautery was applied before the arteries of the pedicle were ligated, not after, as one would infer from the doctor's report. The contents having escaped through the broken walls of the cyst, into the cavity of the abdomen, it was found necessary to scoop them out with the hand and afterwards to employ the sponge, as the safety of the woman was very closely dependent on the success thus achieved. Dr. Ranney rendered me valuable assistance in this step of the operation and I desire to acknowledge my indebtedness for his dexterous manipulation of the sponge. This cleansing of the abdominal cavity consumed over two hours in its completion. After the above steps had been completed, I closed the wound by means of silver wire, first placing a flat sponge (as is my custom) over the intestines to catch the blood from the needle wounds. After applying the necessary dressing to the wound, I turned the case over to Dr. Ranney, and, doubtless, its successful outcome is due to the intelligent manner in which that gentle-

man carried out my instructions, given at the time and supplemented by advice by mail.

The above is a faithful report of my and Dr. Ranney's connection with the case, and with it before them, I am quite willing to leave it to the readers of the JOURNAL to decide who performed the operation.

EDWARD W. JENKS.

84 Lafayette Ave.

NATIONAL BOARD OF HEALTH.

CHICAGO, ILL., Dec. 22, 1884.

To the Editor:—Having noticed in last week's issue of the JOURNAL, the bill presented to the Committee on Public Health on the above subject, and which doubtless will be introduced in Congress by Mr. Beach, chairman of this committee, the thought has occurred to me, as doubtless it has to many others who have read the bill, that while it covers the ground very completely indeed for the purpose for which it is intended, a suggestion may not be devoid of interest at this time, to be offered, perhaps, as an amendment to this bill, or to that portion of it which relates *more particularly to the selection of members* which shall constitute the National Board of Health. And I trust while doing so I may not be regarded as acting in the capacity of instructor to the honorable representative from New York, nor to those who assisted in framing this bill, but that I shall be accorded space in stating what I believe to be the sentiment of more than 90 per cent. of the physicians throughout the United States, as well as the views of all the people. The following is the bill as it now reads:

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That an act entitled: An act to prevent the introduction of contagious and infectious diseases into the United States, and to establish a National Board of Health, approved March 3, 1879, be so amended as to provide that there shall be established a National Board of Health to consist of *one member from each State Board of Health now established, or which may be hereafter established*, etc., etc."

Assuming that the above bill, or a similar, one will be passed by Congress this winter, and the appropriation asked for granted, or that a suitable amount will be appropriated for the object of perpetuating a National Health Authority, does not the bill as it now stands savor just a little of partiality in the selection of members who shall constitute this National Board?"

To illustrate. We will suppose that Illinois has 5,000 well educated, honorable physicians, all of whom are engaged in the practice of medicine and surgery, of whom 1,500 are residents of Chicago and Cook county. Are these 5,000 doctors to be ignored in the selection or the appointment of one of its members to the National Board of Health? Are there no hygienists or sanitarians in this large number, from which a proper and judicious selection of one member for the National Board can be made, instead of confining the selection to one of the seven now constituting the Illinois State Board of Health?

Are the Territories also to be slighted in this selection? Of the several Territories, is it not to these newer countries that emigration is attracted and largely destined, and where disease is often generated? Are there not hundreds of scientific medical men, eminent in the profession, living within territorial boundaries, that should have recognition, and also be eligible to membership in this National Board? In making the above suggestions, far be it from my thought to decry or undervalue the different State Boards of Health, or any of the members thereof. On the contrary, in the State of Illinois a number of its present members, and those who previously belonged to it, have already achieved national renown as sanitarians, as doubtless those of the other State Boards of Health have. If I have succeeded in the above remarks in making my subject clear, and the interrogatories herein propounded merit the approval of those who may read them; and if the bill as already stated appears as an unjust one to at least 80,000 practitioners in the United States, for the reasons above stated, then, indeed, it is the duty of those whose attention has been directed to the subject, to promptly notify their respective representatives at Washington of the views herein set forth, or such portions thereof as merit their approval.

Other thoughts occur to the writer, pertaining to the National Board of Health, or the establishment of a Health Bureau as a branch of our Government, which I shall not dwell upon at present, as this letter has been already extended to greater length than was originally intended.

Very respectfully yours,

LISTON H. MONTGOMERY.

MURIATE OF COCAINE IN URETHRAL SURGERY.

The wide range of usefulness as an anæsthetic for cocaine seems as yet unlimited.

After the many eulogies upon it in its effects to prevent pain in operations upon the eye, ear, nose, teeth, skin, I have one to add—that of its power to completely anæsthetize the mucous membrane of the urethra, permitting the painless introduction of the sound, and of enabling the surgeon to operate by cutting on *strictures* of the urethra by a completely painless method.

My first case was a well-built and healthy-looking man, 34 years old, unmarried. Had gonorrhœa six years previous, treated himself with arg. nit. injections. He stated the cure was complete. He came to me on Dec. 5, with an acute gonorrhœa. Treated him by hot water injections medicated with zinc and hydrastin muriate. Found that only a No. 6 soft rubber catheter could be passed on account of strictures. Continued the treatment until discharges ceased, which did so in a week. I then concluded to operate on strictures by Otis's instrument. I painted the urethral surface of penis for several minutes and repeated the operation at intervals of five minutes, obtaining at the end of twenty minutes complete anæsthesia of the entire urethral tract. The

introduction of a sound was painless, as likewise the cutting instrument. The strictures were cut, *three* in number, without the slightest twinge of pain. There was very little subsequent pain or soreness, and my patient was speedily cured.

Case No. 2 had suffered from stricture for four years, had a chronic gleet when he presented himself at my office. I found stricture in membranous portion of urethra. I introduced a soft rubber catheter down to the stricture and injected a four per cent. solution of Merck's. In ten minutes I forced the instrument past the stricture and incised in two places the fibrous band without pain. Very little hæmorrhage, amounting to 4 or 5 drops in all, after which I passed a No. 14 sound with little difficulty. I feel safe in saying that this new therapeutic agent is still in its infancy of usefulness to the profession.

H. A. EBERLE, M.D.

823 Main Street, Kansas City, Mo.

BOOK REVIEWS.

SIXTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF CONNECTICUT, for the fiscal year ending November 30, 1883. Cloth, 124 pages.

The first fifty pages of the volume present the general report. This consists of a discussion of the practical benefits of sanitary enactments, a review of the diseases generally regarded as infectious or contagious, followed by a consideration of the various special subjects coming under the department of State Hygiene. Among the various papers that make up the body of the work is one on the sanitary drainage of tenement houses. This paper is clear and explicit in its style and illustrated by numerous cuts. The concluding pages are occupied by the registration report of the Bureau of Vital Statistics.

C. E. W.

ATLAS OF FEMALE PELVIC ANATOMY. By D. BERRY HART, M.D., F.R.C.P.E., Lecturer School of Medicine, Edinburgh, etc., etc. New York: D. Appleton & Co., 1884. From Jansen, McClurg & Co., Chicago.

This is a new and important contribution to anatomical science. The author is quite well and favorably known on both sides of the Atlantic, from his former works, "Manual of Gynæcology" (with Dr. Barbour) and "Structural Anatomy of Female Pelvic Floor."

The present work is as masterly and complete as seems possible on such a subject. Most of the delineations are new and valuable, especially those forming the plates on fœtal developments and the frozen sections.

Imperfections in our knowledge of precise regional anatomy, especially in the diseases of women, have been the cause of confusion of ideas and disputed theories, with much fruitless discussion. The present work will in future furnish a basis for greater accuracy and precision to all gynæcologists who will avail themselves of it.

It is a handsome quarto volume containing about forty colored plates, all drawn from actual dissections with extreme care and fidelity. As an instance of thoroughness seldom surpassed, the various frozen sections, with the bladder in all stages of fulness, may be cited. The position and form of this organ when emptied and when distended, and the precise influence of its pressure upon other organs is thus shown with almost photographic accuracy. This is true of all other points needing elucidation about the female pelvic viscera, *e.g.*, their positions in pregnancy, in parturition, in the virgin, in the fœtus, in the genu-pectoral posture, etc., etc.

Instructors cannot fail to find this splendid work a mine of usefulness in their classes.

E. W. A.

MEDICAL DIAGNOSIS. A Manual of Clinical Methods. By J. GRAHAM BROWN, M.D. Second Edition. Birmingham & Co., New York.

This is an excellent treatise on physical diagnosis. It is convenient in size. It is written compactly, and is quite full and complete. It is more than a treatise on physical diagnosis, although this constitutes the bulk of the volume, since it describes subjective as well as objective signs of disease. The book is well worth reading. Methods of urinalysis, both chemical and microscopic, are given in the discussion of symptoms and signs of disease connected with the urinary system.

CLINICAL LECTURES ON DISEASES OF THE EYE. Including the Conjunctiva, Cornea Sclerotic, Iris and Ciliary body. By DR. FRED. RITTER VON ARLT, O. O., Professor Augenheilkunde in Wien. Translated by DR. LYMAN WARE, Surgeon Illinois Charitable Ear Infirmary, Ophthalmic Surgeon Presbyterian Hospital and Protestant Orphan Asylum, Chicago. Now in press.

MISCELLANEOUS.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, UNITED STATES ARMY, FROM DECEMBER 13, 1884, TO DECEMBER 26, 1884.

Lauderdale, Jno. V., Captain and Assistant-Surgeon, Ft. Sully, D. T., granted leave of absence for one month, to take effect about Dec. 9, 1884.

Comegys, E. T., Captain and Assistant-Surgeon, granted leave of absence for one month. (S. O. 234, Dept. Mo, Dec. 8, 1884.)

Pilcher, J. E., First Lieutenant and Assistant-Surgeon, ordered to Ft. Custer, M. T., for duty. Order assigning him to duty at Ft. A. Lincoln, D. T., amended. S. O. 145, Dept. Dak., Dec 8, 1884.)

Wales, P. G., First Lieutenant and Assistant Surgeon. Relieved from duty in Department Colorado and ordered to Department Arizona. (S. O. 128, Div. Pacif. Dec. 17, 1884.)

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY DURING THE WEEK ENDING DECEMBER 20, 1884.

Kindleberger, D., Medical Inspector. Detached from the "Hartford," and placed on sick leave.